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SMALL BUSINESS AND THE COMMUNITY

A STUDY IN CENTRAL VALLEY OF CALIFORNIA ON EFFECTS OF SCALE OF FARM OPERATIONS

REPORT
OF THE
SPECIAL COMMITTEE TO STUDY PROBLEMS
OF AMERICAN SMALL BUSINESS
UNITED STATES SENATE
SEVENTY-NINTH CONGRESS
SECOND SESSION
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FOREWORD

The Senate Small Business Committee recently published a report, Small Business and Civic Welfare, which was a study of the contrasts and similarities of two groups of cities, those in which independent small businesses predominated and those whose economy was characterized by large-scale business activities. This pioneer study revealed numerous facts on the social-economic and cultural practices of different types of American communities. With no important exception, the cities characterized by locally owned and operated independent businesses were found to be much better off than comparable cities whose business institutions were large scale and frequently absentee-owned. In submitting this report to the Congress, I, as chairman of the Senate Small Business Committee, made it clear that this was one relatively small glimpse of the American business scene. Only through further studies of this kind, covering other sections of the country and different conditions of life, would we eventually obtain documentary proof of the relative value of big or small business in providing that kind of social life which best expresses our desires as free people living under a democratic political and economic system.

This report, Small Business and the Community, is another of these regional studies. A preliminary report, based on the study of two communities having essentially similar agricultural production but differing in the size of landholdings in the surrounding area, was presented to the committee during its field hearings. This testimony had a decided impression on the members, and the request followed that the completed report be submitted for publication in this series of studies covering the problems of small business, made under resolution of the Senate.

This report is the work of Dr. Walter R. Goldschmidt, assistant professor in the Department of Anthropology and Sociology, at the University of California at Los Angeles. He had the advantage of advice and assistance of professional associates of national reputations in the field of agricultural economics and social studies.

Prof. Leonard Bloom, sociologist at the University of California at Los Angeles, writes:

> I wish to express the opinion that this is a research of some importance which was carried out according to the most rigorous and objective scientific procedures. Shortly after it was completed, Dr. Goldschmidt submitted it to me for a critical appraisal, and I was completely satisfied with the competence of the work. It seems to me that this kind of work should commend itself to the attention of all persons interested in such questions because of its objectivity, impartiality, and scholarly soundness, and I feel that it merits publication.

Dr. Paul S. Taylor, professor of economics, University of California, at Berkeley, eminent authority in agricultural economics, writes:

> I have been in touch with the comparative study of Arvin and Dinuba in the Central Valley of California since its inception. Its author, Dr. Walter R. Goldschmidt, is a competent scholar, well equipped by training and experience

to make such a study. The study of the two towns was made with care. The treatment is temperate and scholarly. The conclusions are based upon data which were selected well and handled with critical ability. I have no hesitancy in recommending that your committee publish the study as a scholarly contribution to an understanding of an important problem.

It cannot be stressed too strongly that this report deals with a comparison of only two communities. It is not intended to be considered representative of other communities in the United States. However, it is not thereby rendered valueless. On the contrary, here is a detailed analysis, following the approved techniques of social and economic research, of two "case studies." Such careful, unbiased, and impartial scientific collections of facts permit of conclusions having considerable validity and reliability. They are quite likely to be true descriptions of the cases being examined, and raise pertinent questions concerning their probable application for other communities exhibiting similar, if not identical, conditions. The data suggest many questions concerning the relative desirability of different types of farm organization as their size and the character of their operations influence the cities which are their trading and cultural centers.

It would be unwise to summarize the findings of this study, apart from the descriptive material which forms the setting, and the techniques employed which determine the adequacy of treatment. With the major difference between the two areas being that of the size of the farm holdings, in one predominantly large-sized ranches, in the other numerous smaller-sized farms, the communities were subjected to many measures. The people living in each city were examined as to their number, size of families, age distribution, social background, occupations, incomes, and living conditions. The social aspects of the two cities were examined as to government, schools, social institutions, problems of youth, the social role of the church, and the social structure. The business structure was examined in detail. Out of this mass of facts came certain observations concerning the causes of the differences found. The conclusion drawn, and which impresses itself on any unbiased readers as in reality emerging from these numerous facts, is that the size and character of the farm holdings and operations is responsible in no small degree for the conditions in these cities. On the one hand, in the community surrounded by big farms the social, cultural, and economic attributes of life are developed to a lesser degree than in the other community which is in the midst of an area made up primarily of smaller farms independently operated where the community welfare is of a higher order and more wholesome in every particular.

The bearing on the American way of life, which is all-important to all of us who seek to see the virility of this Nation go on unimpaired, is at once apparent. I submit this study to the Senate Small Business Committee, to the United States Senate, and the citizens of this country, feeling that it further indicates the importance of independent small-scale business as the cornerstone of our American economic system of free enterprise.

Sincerely yours,

James E. Murray, *Chairman.*

SMALL BUSINESS AND THE COMMUNITY

A STUDY IN CENTRAL VALLEY OF CALIFORNIA ON EFFECTS OF SCALE OF FARM OPERATIONS

BY

DR. WALTER R. GOLDSCHMIDT

ASSISTANT PROFESSOR OF ANTHROPOLOGY AND SOCIOLOGY
UNIVERSITY OF CALIFORNIA AT LOS ANGELES

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Sincerely yours,

James E. Murray, Chairma

INTRODUCTION

The family farm is the classic example of the American small-business enterprise. For generations this institution and the community it supports have held the esteem of all who have known and understood the American heritage. Statesmen, historians, economists, and sociologists have generally agreed that the spread of the family farm over the land has laid the economic base for the liberties and the democratic institutions which this Nation counts as its greatest asset.

The great declaration by Daniel Webster still stands as perhaps the clearest and most authentic expression of America's deep-rooted belief in the intimate and causal relation between the family farm and the distinctively popular character of our Government.

> Our New England ancestors—

he said—

> brought thither no great capitals from Europe; and if they had, there was nothing productive in which they could have been invested. They left behind them the whole feudal policy of the other continent. * * * They came to a new country. There were as yet no lands yielding rent, and no tenants rendering service. The whole soil was unreclaimed from barbarism. They were themselves either from their original condition, or from the necessity of their common interest, nearly on a level in respect to property. Their situation demanded a parceling out and division of the land, and it may fairly be said that this necessary act *fixed the future frame and form of their government.* [Webster's italics.] The character of their political institutions was determined by the fundamental laws respecting property. * * * The consequence of all these causes has been a great subdivision of the soil and a great equality of condition; the true basis, most certainly, of popular government. * * *

The advances in technology during the past century have greatly benefited farmers who, with their families, work the land. The industrial revolution has eased the burden of the farmer and rendered his labors more productive. Yet these technological advances have, at the same time, brought a threat to the very institution to whose personnel they have brought so much aid. The threat is this: That with increased mechanization will come increased industrialization of the farm enterprise; that with industrialization will come an increasing concentration of economic power in the hands of fewer and fewer men at the head of great organizations, and an end to that broad diffusion of social and economic benefits that has long been characteristic of American rural communities.

There is foundation for the belief that industrialization is on the increase. The United States Census of Agriculture has been recording the gradual increase in average farm size in America. This is not a result of the disappearance of undersized farms; family farmers on the better lands appear to be particularly vulnerable. Census statistics are supported by other information. In those areas particularly suitable to high-value specialty crops, the concentration of land and production into large units has been reported by various agencies and students of American agriculture. A committee of the United States Senate has pointed out that within the decade of the thirties the percentage of all farms in California which produce just over one-half the total agricultural production of that State fell from 10 to 6.8 percent, marking a growth in concentration of nearly one-third. It is not without significance as evidence of this trend that at least one group of specialty crop producers has so far changed its character away from that of family farmers and in the direction of becoming industrialists that it has found itself indicted for violation of the antitrust laws of the Nation.

The development of large-scale farming has been foremost in California. The influence of Spanish land policy, the monopolization of large areas by early comers after American statehood, the soil and climate favorable to the production of specialty crops, and congeries of other historic and economic circumstances have made California particularly amenable to industrialized agricultural production. But development of this pattern of agriculture, often operated like industry from urban centers and worked by wage labor, is not peculiar to any one part of the Nation. It has been reported in some degree from all sections.

Whether industrialization of farming is a threat not only to the family farm, but also to the rural society founded upon the family farm, is the specific subject of the present report. The purpose of this study is to test by contemporary field research the historic hypothesis that the institution of small independent farmers is indeed the agent which creates the homogeneous community, both socially and economically democratic.

The present inquiry consists of a detailed analysis and comparison of two communities, one where agricultural operations are on a modest scale, the other where large factory-like techniques are practiced. Both communities lie in the fertile southern San Joaquin Valley in the Great Central Valley of California, where highly developed and richly productive agriculture is characteristic. Limitations of time and resources dictated that no more than two communities be studied. Numerous other pairs might have been chosen which doubtless would have yielded comparable results.

The two communities studied here naturally vary in some degree with respect to proportions of surrounding lands devoted to this or that crop, with respect to age, to depth of water lift for irrigation, etc., as well as with respect to the scale of the farm enterprises which surround them. Controls as perfect as are possible in the chemist's laboratory are not found in social organizations. Yet the approximation to complete control achieved by selection of the communities of Arvin and Dinuba is surprisingly high. Other factors, besides the difference in scale of farming, which might have produced or contributed to the striking contrasts of Arvin and Dinuba have been carefully examined. On this basis the conclusion has been reached that the primary, and by all odds the factor of greatest weight in producing the essential differences in these two communities, was the characteristic difference in the scale of farming—large or small—upon which each was founded. There is every reason to believe that the results obtained by this study are generally applicable wherever like economic conditions prevail.

SUMMARY OF FINDINGS

Certain conclusions are particularly significant to the small businessman, and to an understanding of the importance of his place in a community. Not only does the small farm itself constitute small business, but it supports flourishing small commercial business.

Analysis of the business conditions in the communities of Arvin and Dinuba shows that—

(1) The small farm community supported 62 separate business establishments, to but 35 in the large-farm community; a ratio in favor of the small-farm community of nearly 2:1.

(2) The volume of retail trade in the small-farm community during the 12-month period analyzed was $4,383,000 as against only $2,535,000 in the large-farm community. Retail trade in the small-farm community was greater by 61 percent. (See figure and table, pp. 83 and 84.)

(3) The expenditure for household supplies and building equipment was over three times as great in the small-farm community as it was in the large-farm community.

The investigation disclosed other vast differences in the economic and social life of the two communities, and affords strong support for the belief that small farms provide the basis for a richer community life and a greater sum of those values for which America stands, than do industrialized farms of the usual type.

It was found that—

(4) The small farm supports in the local community a larger number of people per dollar volume of agricultural production than an area devoted to larger-scale enterprises, a difference in its favor of about 20 percent.

(5) Notwithstanding their greater numbers, people in the small-farm community have a better average standard of living than those living in the community of large-scale farms.

(6) Over one-half the breadwinners in the small-farm community are independently employed businessmen, persons in white-collar employment, or farmers; in the large-farm community the proportion is less than one-fifth.

(7) Less than one-third of the breadwinners in the small-farm community are agricultural wage laborers (characteristically landless, and with low and insecure income) while the proportion of persons in this position reaches the astonishing figure of nearly two-thirds of all persons gainfully employed in the large-farm community.

(8) Physical facilities for community living—paved streets, sidewalks, garbage disposal, sewage disposal, and other public services—are far greater in the small-farm community; indeed, in the industrial-farm community some of these facilities are entirely wanting.

(9) Schools are more plentiful and offer broader services in the small-farm community, which is provided with four elementary schools and one high school; the large-farm community has but a single elementary school.

(10) The small-farm community is provided with three parks for recreation; the large-farm community has a single playground, loaned by a corporation.

(11) The small-farm town has more than twice the number of organizations for civic improvement and social recreation than its large-farm counterpart.

(12) Provision for public recreation centers, Boy Scout troops, and similar facilities for enriching the lives of the inhabitants is proportioned in the two communities in the same general way, favoring the small-farm community.

(13) The small-farm community supports two newspapers, each with many times the news space carried in the single paper of the industrialized-farm community.

(14) Churches bear the ratio of 2 : 1 between the communities, with the greater number of churches and churchgoers in the small-farm community.

(15) Facilities for making decisions on community welfare through local popular elections are available to people in the small-farm community; in the large-farm community such decisions are in the hands of officials of the county.

These differences are sufficiently great in number and degree to affirm the thesis that small farms bear a very important relation to the character of American rural society. It must be realized that the two communities of Arvin and Dinuba were carefully selected to reflect the difference in size of enterprise, and not extraneous factors. The agricultural production in the two communities was virtually the same in volume—2½ million dollars per annum in each—so that the resource base was strictly comparable. Both communities produce specialized crops of high value and high cost of production, utilizing irrigation and large bodies of special harvest labor. The two communities are in the same climate zone, about equidistant from small cities and major urban centers, similarly served by highways and railroads, and without any significant advantages from nonagricultural resources or from manufacturing or processing. The reported differences in the communities may properly be assigned confidently and overwhelmingly to the scale-of-farming factor.

The reasons seem clear. The small-farm community is a population of middle-class persons with a high degree of stability in income and tenure, and a strong economic and social interest in their community. Differences in wealth among them are not great, and the people generally associate together in those organizations which serve the community. Where farms are large, on the other hand, the population consists of relatively few persons with economic stability, and of large numbers whose only tie to the community is their uncertain and relatively low-income job. Differences in wealth are great among members of this community, and social contacts between them are rare. Indeed, even the operators of large-scale farms frequently are absentees; and if they do live in Arvin, they as often seek their recreation in the nearby city. Their interest in the social life of the community is hardly greater than that of the laborer whose tenure is transitory. Even the businessmen of the large-farm community frequently express their own feelings of impermanence; and their financial investment in the community, kept usually at a minimum, reflects the same view. Attitudes such as these are not conducive to stability and the rich kind of rural community life which is properly associated with the traditional family farm.

METHODS OF RESEARCH

A variety of techniques were used to gather the data upon which this study is based. Fundamental were the schedules which afford data on population composition, social participation, and level of living. They were obtained by two field enumerations over a period of 4 weeks in each community (spring, 1944) based upon a 10-percent sample of the houses in the town and surrounding country. The information from this source was enriched by interviews with community leaders taken by the author. The area surrounding each community was determined by a well-established technique of community delineation long used by rural sociologists and executed by a person trained in its application.

Statistical data were obtained from several sources other than the schedule. Certain data were available from county and community files. Special mention should be made of two sources. Data on size of farms, acreage devoted to various crops, and yields were obtained from the records of the Agricultural Adjustment Administration, analyzed by competent agricultural economists. The data on number and volume of business enterprises were extracted from the records of the Sales Tax Division of the California State Board of Equalization. These data were made applicable to the community as delineated, including the agricultural areas.

The author makes grateful acknowledgment to those numerous persons who by their counsel and as participants in the study have made its execution possible. Members of the communities of Arvin and Dinuba were generous in their cooperation.

CHAPTER I

NATURE OF INVESTIGATION

PURPOSE

This study of two rural communities is an endeavor to analyze social causation. In it an attempt has been made to demonstrate the kind of society that results when large-scale farm operations dominate the economy of a community as contrasted with society under moderate-size farm operations. To this end a detailed analysis of two towns lying in the industrialized specialty-crop farming area of California's Central Valley, one surrounded by large farms and the other by enterprises of moderate size, was made. The present report sets forth in detail the social and pertinent agricultural and other economic facts about each community, and concludes with an analysis of these differences which indicates the extent to which they may properly be attributable to the scale of farm operations.

It should be made clear at the outset that this report is a study of the social and business effects of large-scale farming operations as they apply to the local agricultural community. Investigation of the effects upon major urban centers or the character of social and economic conditions of the Central Valley or of the State as a whole are not a subject of the present analysis, except insofar as they are affected by the welfare of the local community.

Research methods are commonly affected by the costs of various procedures. The desirability of analyzing a series of communities, or of establishing indexes which might make possible simpler studies of additional communities, was recognized and at one time specifically planned. Shortage of time, manpower, and funds made such a program impossible. It has, therefore, been necessary to develop conclusions by internal analysis of the data.

Arvin and Dinuba, the communities studied, are not a sample of all communities of California or of the Central Valley. They are cases, a method which has gained acceptance in the social sciences generally and particularly in the study of the community.

It has been the method used by Lynd for Middletown, by Warner for Yankee City, and by every student of the rural community. The case study depends not upon adequacy of sample but upon the soundness of the selection of the cases as representative of the phenomena subjected to analysis.

CHOICE OF COMMUNITIES

The importance of proper selection was recognized at the outset, and extreme care was used to get a fair and representative selection. The fundamental criteria were that the two communities (1) be sufficiently similar in size so that they could be expected to support similar institutions; (2) have similar and, if possible, reasonably diverse agriculture; (3) have existed for enough years to allow time for the development of social institutions; (4) not be confused with extraneous advantages, such as large mineral deposits; and, of course, (5) that the farm size be significantly divergent.

The two communities chosen for this investigation were Arvin (Kern County), as a large-scale farming community, and Dinuba (Tulare County), for the community surrounded by farms of moderate size.[1]

Certain vital statistical information was being collected for other purposes for the agricultural areas of Madera, Kern, and Tulare Counties, and therefore it was desirable to select a community from within that area. Furthermore, this includes most of the "project area" of the Central Valley project, and it seemed desirable to remain within the geographic region in which this development was to take place. It was important to have communities of sufficient size to support social and economic institutions yet not so large that the totality of these could not be grasped in the limited time available for field study. In practice this meant a community of not under 2,500 and not over 10,000 population. It was also desirable to have communities which farmer and laborer both utilized; where institutions served both these segments of the population, since both groups are an essential part of farm production in the area. Finally, the towns should be of sufficient age so that they have had the opportunity for the development of social and economic institutions.

Table 1 shows the communities of Madera, Kern, and Tulare Counties from which a choice was made. The figures are based upon estimated boundaries around each community, but indicate the relationship in population, land use, and size of farms. (Boundaries were more accurately drawn for the two communities studied, and agricultural and population figures do not conform exactly to these rougher approximations which were used at the time of selection.) The towns are in order of average acre-equivalent farm size.[2] Communities near the opposite poles were selected though extremes were not sought.

In practice, the strictures were not easy to apply, especially the stricture that the communities be similar. In the first place, as everyone acquainted with California agriculture knows, there is a wide diversity of crops, soils, and water conditions, and it is impossible to find communities identical in these respects. Yet it was possible to get general similarity with respect to quality of soil, major agriculture production, and the influence of nonagricultural resources.

Details of the agriculture are presented in a later section, where a thorough analysis of the characteristics of farming and types of production is made. A few significant comparisons will show the validity and limitations of the selection. In both communities a variety of crops, and very similar crops, were grown. The Dinuba area, however, is far more highly specialized than the Arvin one, with over two-thirds of the total value of production in fruit and grapes, chiefly the latter. Cotton and vegetables are more plentiful in Arvin than in Dinuba though they are grown in both communities. Forage crops and livestock were very nearly the same in the two areas. The total

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[1] It is more economic to use the expression "large farm community" and "small farm community," and these will be used in the discussions that follow. A clear picture of the actual situation with regard to size is presented in a subsequent section and the terms will thus be recognized as having comparative rather than absolute value. The term "small farm" as used here may better be considered a family-sized commercial farm, and must not be confused either with part-time or subsistence farms.

[2] This adaptation of the standard acre has been worked out on the basis of data available. (See Methodology in appendix B.)

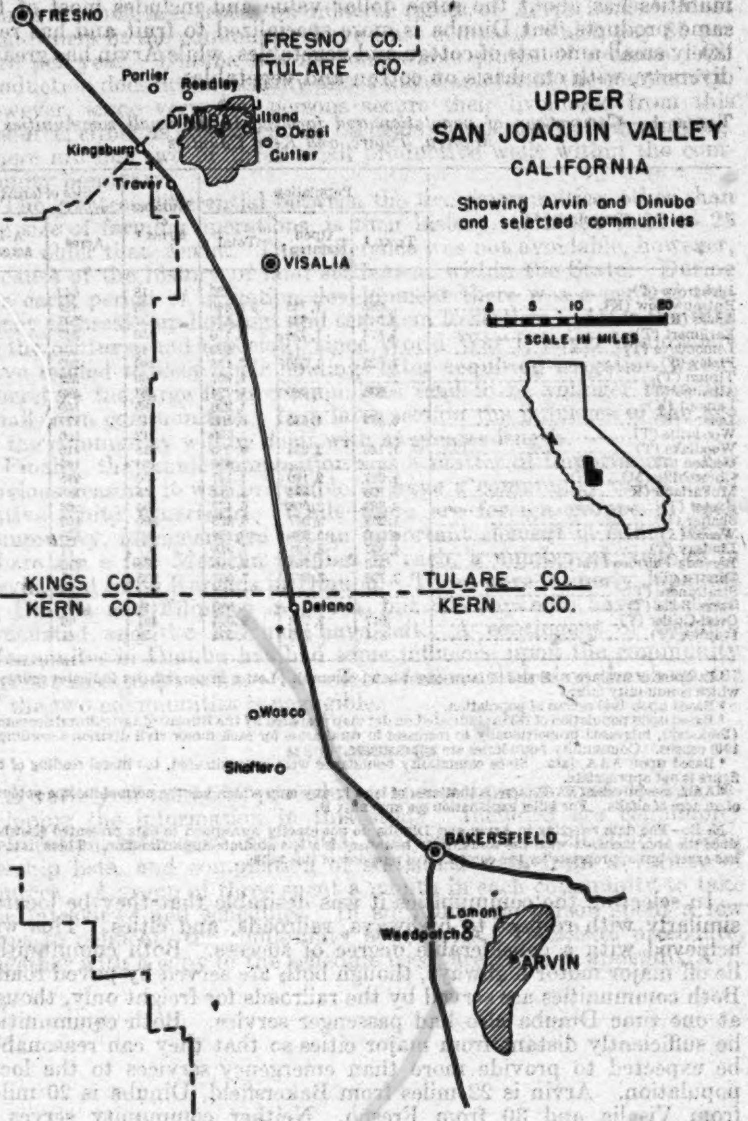
UPPER
SAN JOAQUIN VALLEY
CALIFORNIA
Showing Arvin and Dinuba and selected communities
FRESNO
FRESNO CO.
TULARE CO.
Parlier
Reedley
Sultana
DINUBA
Orosi
Cutler
Kingsburg
Traver
VISALIA
0 5 10 20
SCALE IN MILES
KINGS CO.
KERN CO.
TULARE CO.
KERN CO.
Delano
Wasco
Shafter
BAKERSFIELD
Lamont
Weedpatch
ARVIN

FIGURE No. 1

estimated value of production in the two communities was nearly identical. In summary, the agricultural production in the two communities has about the same dollar value and includes most of the same products, but Dinuba is more specialized to fruit and has relatively small amounts of cotton and vegetables, while Arvin has greater diversity, with emphasis on cotton and vegetables.

TABLE 1.—*Comparison of population and farming in the small communities in Madera, Tulare, and Kern Counties*

Community[1]	Population			Number of farms[4]	Size of farms	
	Town[2]	Open country[3]	Total		Acres	A-E acres[5]
Richgrove (T)	--------	--------	325	16	642	304
Buttonwillow (K)	685	1,755	2,440	98	432	201
Arvin (K)	4,042	631	4,673	137	297	247
Earlimart (T)	1,174	1,936	3,110	150	247	234
Lemoncove (T)	--------	--------	930	44	104	223
Pixley (T)	1,625	1,530	3,155	180	232	192
Tipton (T)	--------	--------	1,867	166	222	182
Alpaugh (T)	638	1,086	1,724	133	490	167
Lamont (K)	--------	--------	1,220	85	156	165
Delano (K)	4,573	1,535	6,108	341	177	159
Woodville (T)	--------	--------	1,130	112	156	155
Woodlake (T)	1,146	2,934	4,080	215	110	152
Goshen (T)	--------	--------	1,436	104	160	148
Chowchilla (M)	1,957	2,190	4,147	430	215	139
McFarland (K)	2,120	1,894	4,014	115	188	138
Exeter (T)	3,883	2,554	6,437	264	68	124
Shafter (K)	1,258	5,067	6,325	300	102	108
Wasco (K)	4,916	5,338	10,254	190	128	101
Lindsay (T)	4,397	3,521	7,918	877	77	101
Berenda-Fairmead (M)	353	1,763	2,116	228	216	94
Dinuba (T)	3,790	3,877	7,667	635	45	84
Strathmore (T)	--------	--------	1,690	214	42	81
Terra Bella (T)	--------	--------	1,580	141	131	76
Orosi-Cutler (T)	917	2,778	3,695	451	69	76
Ivanhoe (T)	814	780	1,594	159	41	73

[1] In order of average A-E size of farm (right-hand column). Letter in parentheses indicates county in which community falls.

[2] Based upon 1940 census of population.

[3] Based upon population of 1935 as indicated on dot map prepared by the Bureau of Agricultural Economics (Berkeley), increased proportionally to increases in rural areas for each minor civil division according to 1940 census. Community boundaries are approximate.

[4] Based upon AAA data. Since community boundaries were approximated, too literal reading of this figure is not appropriate.

[5] An acre-equivalent (A-E) acre is that area of land in any crop which has the normal income potential of an acre of alfalfa. For fuller explanation see appendix B.

N. B.—The data referring to Arvin and Dinuba do not exactly correspond to data presented elsewhere since the area included with the community boundary is a less accurate approximation. These data are less exact, but appropriate for the comparative purposes of this table.

In selecting the communities it was desirable that they be located similarly with respect to highways, railroads, and cities. This was achieved with a considerable degree of success. Both communities lie off major motor highways, though both are served by paved roads. Both communities are served by the railroads for freight only, though at one time Dinuba also had passenger service. Both communities lie sufficiently distant from major cities so that they can reasonably be expected to provide more than emergency services to the local population. Arvin is 22 miles from Bakersfield, Dinuba is 20 miles from Visalia and 30 from Fresno. Neither community serves a tourist population, though Arvin has in the past taken advantage of its location for holding glider meets and thereby gained publicity if not actual economic advantage.

Arvin lies just south of fairly extensive oil fields, and there is sufficient likelihood of finding underlying strata of oil to induce oil companies to maintain leases on mineral rights of Arvin lands. Most landowners in the community have lease contracts which pay $5 per acre per year. Dinuba has no comparable source of revenue. Oil production does not materially affect the character of the community, however, since very few persons secure their livelihood from this resource, either as laborers in the oil fields or as a result of oil pumping. There are but two or three small productive wells within the community boundary.

The greatest differential between the two communities, other than the size of farming operations, is their history. Dinuba is 20 to 25 years older than Arvin. This difference was not avoidable, however, because of the history of land settlement within the State. During the early period of irrigation development there was a general tendency to break up holdings and sell them to settlers. After the turn of the century, and especially since World War I, larger landowners have tended to keep their holdings after acquiring irrigation water. Therefore the large farm communities tend to be younger than the small farm communities. In a later section the influence of the age of the community will be dealt with at greater length.

Finally, the ethnic composition was a matter of importance. For obvious reasons it was preferable to have a community made up of native white Americans. While there are foreign groups in each community, foreigners are not an important element in either town. There are a few Mexican families in each, a number of Negroes in Arvin, and some Koreans in Dinuba. There were formerly Japanese in Dinuba and Filipinos in Arvin, but the Japanese have all been evacuated and the Filipinos have left. A contingent of German Mennonites in Dinuba has had some influence upon the community but not an extensive one. The effect of alien cultures on the character of the two communities is negligible.

METHODOLOGY

A variety of methods, procedures, and techniques were used in developing the information in this study. Included are community delineation, interviews, schedules, analysis of club and church membership lists, and compilation of statistical data from a variety of sources. A group of three spent a month in each community to take the interviews and schedules. In addition, one person spent a few days to delineate the community boundaries. Details of precedure, together with a copy of the schedule used, are given in appendix A.

CHAPTER II

HISTORICAL BACKGROUND OF ARVIN AND DINUBA

Before the analysis and comparison of the social picture of the two communities can be meaningful, it is necessary to have a clear picture of their resources, physical setting, and historical development.

ARVIN

SETTING

Arvin lies south and east of Bakersfield, about 10 miles from the highway running eastward to Arizona and about the same distance from the highway south to Los Angeles. The climate is that of a desert, with less than 10 inches average annual rainfall. The soil has been built into alluvial fans by streams out of the mountains to the east and is of excellent quality. The farming area is quite flat, with a very gentle slope to the north and west. A few miles east of Arvin are the foothills of the Tehachapi Range, bare of trees but covered with good range grass. Most of the land in these foothills belongs to the great El Tejon ranch. To the south of Arvin lies undeveloped land, though more and more of this is now being cultivated by the use of deep wells and heavy-duty pumps. There is still considerable land available for development in this area, but unless the water supply is augmented it is doubtful if sufficient water is available for the continued irrigation of lands now using ground waters. The land to the north and west has for a long while been held in very large holdings, and most of it is now owned and operated by the DiGiorgio Fruit Corp. The community is bounded on the north by a small draw which is often rendered impassable by floods. Westward from the town there is a large area of moderately large farms, and this extends unbroken into the neighboring communities of Weedpatch and Lamont. Weedpatch derives its name from the fact that after the spring floods weeds in this area grow over the head of a man on horseback. It was the earliest community in the area, but at present is merely a crossroads center. Lamont, north of Weedpatch, has come to be a large center for laborers. Neither of these communities is as active commercially as Arvin, however, and neither of them presents a great threat with respect to trade potentials. For instance, the county has decided to place the proposed high school at Arvin rather than near the other two communities.

HISTORY

Arvin lies in the shadow of one of the oldest large ranches in the State—the El Tejon. But this ranch apparently has had little or no direct effect upon the community. Much of the flat land around Arvin was homesteaded at about the turn of the century. In 1910 a colony was started in Arvin dependent upon community irrigation wells. At this time many of the homesteaders sold their holdings to these settlers for about $10 an acre. This was the beginning of the development of intensive farming in the community, and many of the small farms today have come down from this early period. During these early days the settlers suffered the hardships of the pioneer. The route to the nearest railroad was the dust-covered buggy tracks running across the desert. In 1912, according to one woman who is still in the community, she was the only farm wife in the area, and while there was electricity for pumping irrigation water, there was none for household use. During the second decade of the century more land was developed. It was during this period that the largest single holding was developed, as well as many other units now in operation. Land values rose from the $10 per acre which the original homesteaders received from their sales to about $100 an acre, which is said to have been the average price during the First World War.

Cattle were the first agricultural commodity produced in the area, but diversified farming came in with the development of small ranches in the period 1910–15. Walnuts and hops were produced quite early. It is generally claimed that it took three "generations" of farmers to make a farm; that is, that the investments of two failures were required before a man could make money by farming. Two classes of crops have in the course of time proved themselves profitable under the relatively high water cost—field crops and fruit produced to meet the early-season market. The land and climate is ideally suited to the cultivation of cotton under irrigation, and the early growing season makes it possible for fruits to mature for the earliest market and thereby bring premium prices. Grapes are harvested as early as July and plums frequently in May. According to one pioneer farmer it was cotton that saved the Arvin area. Cotton was first cultivated in the 1920's and is still an important crop. The earliest data available on cotton in the community indicate that there were 7,756 acres in the Arvin-Weedpatch-Lamont area in 1931 and 9,306 in 1932.[3] The Agricultural Adjustment Agency data for 1940 indicate 6,533 acres in cotton in the Arvin community alone (15 percent of all cropland reported). While the total acreage in cotton has remained fairly constant since the early 1930's, it is now far less important proportionately than formerly.

The average farm in Arvin is quite large, though, as already indicated, not the largest in the San Joaquin Valley. The reasons for this lie both in history and environment and are compounded of the following factors: Nature and cost of water development, the historical timing of the development around Arvin, the fact of DiGiorgio developing land within that community, and the type of crops grown in the area.

As stated above, Arvin lies in a desert which, though occasionally flooded by melting snows and spring rains, has no stable surface-water supply. The underground water table was such that it could not be developed until a certain level of pump efficiency was reached. Thus it was that though the area had been homesteaded, and one of California's oldest and largest cattle ranches was developed in the neighborhood, the region was unsettled at the beginning of the twentieth century. In 1910 the first concerted effort at land settlement was made. This colony formed the basis of the present community and has left its mark on the present land pattern.

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[3] Data compiled by Kern County Agricultural Commissioner obtained from the files of the farm advisor, Kern County. See also later discussions.

The tenure pattern just after 1910 included a number of small units in a colony, a number of homesteaded tracts, a considerable acreage in large holdings, and, apparently, some moderately large holdings. Intensive farming was rare, with permanent planting first being attempted.

Arvin's development during the 1920's and early 1930's was not rapid, but from about 1935 to the present time there has been a great increase in the acreage of land under cultivation. This development has mostly been in field crops and alfalfa, with cotton and potatoes the principal crops grown. There has been a continuous development of vines and tree fruits also. Table 2 shows the shipments of fruit and vegetables from 1921 to 1943. While tree fruit increased by about 50 percent and grapes doubled during the last 10 years, the shipment of vegetables (mostly potatoes) increased tenfold.

TABLE 2.—*Shipment of fruits and vegetables from Arvin, 1921–43*

Year	Cars shipped				
	Tree fruit	Grapes	Vegetables	Unspecified	Total
	Cars	*Cars*	*Cars*	*Cars*	*Cars*
1921		4	31		35
1922	47	25	205		277
1923	78	134	194		406
1924		705	191		896
1925	17½	1,505	47		1,569½
1926	24	1,222½	160		1,406½
1927	42½	1,174	213	128½	1,558
1928	95	1,213	42	122½	1,472½
1929		1,653½		143½	1,797
1930	128½	1,500	275		1,904
1931	156½	1,269½	112	156	1,694
1932	219	1,595	210	162	2,186
1933	191	1,492½	17	113	1,812½
1934	251	1,619½	123	191½	2,185
1935	160	1,904	37	44	2,145
1936	292½	2,520½		140	2,953
1937	338½	3,675½	45½	90½	4,150
1938	361	3,035	410	131	3,937
1939	285	2,491½	592	245	4,313
1940	360½	3,240½	564		4,165
1941	325	2,365½	1,171		3,862½
1942	326½	2,569	1,577	368	4,840½
1943	328	2,698½	2,872	719	6,617½

NOTE.—Carlot shipments are a measure of volume the value of which varies with the class of commodity. They furnish only an approximation of the value or acreage. Neither cotton nor alfalfa is reported. These classes of commodity accounted for 47.5 percent of the irrigated acreage in 1940 and 61 to 63 percent in 1931–32.

Source: Based upon the records in the office of the Kern County Agricultural Commissioner. Truck shipments converted to carlot basis.

The most recent developments have almost universally been in large tracts and on a highly speculative basis, with large investments in pumps and land leveling. The need for deep wells and powerful pumps has inhibited the growth of small operators. To utilize these deep wells fully, joint use must be made of them either by incorporation, partnerships, or cooperative arrangements. There are several such arrangements; some of 20 years' standing are now operating successfully. Such practices are readily feasible, but the need for group action and large capital outlay inhibits their development.

The growth of speculative development of farming operations, the tendency to concentrate on annual crops, and the development of large tracts are all part of the dominant pattern of Arvin's agriculture, and set it off from the Dinuba pattern and from family farming in general. It is a development which appears elsewhere in the State; the Imperial Valley, the Salinas Valley, the Sacramento-San Joaquin Delta, the west side of Fresno County, and in parts of Kern County, especially lands along Highway 99 which have recently been released from stock raising uses for intensive agriculture. In Arvin it overlies older patterns of large operations as well as a pattern of small operations as exemplified by the present descendents of the 1910 colonization.

DINUBA

SETTING

Dinuba lies about 10 miles east of Highway 99, about 32 miles southeast of Fresno and about 20 miles north of Visalia, in the northwestern corner of Tulare County. It is in the southern end of the grape-producing area which centers in Fresno County, and is supplied with water by the Kings River, supplemented with water pumped from a shallow underground basin. Unlike Arvin, Dinuba is surrounded by neighboring communities which rival it in importance and size. The nearest of these, about 7 miles away, is Reedley, a grape-producing community. Next is Kingsburg, a thriving community of comparable size, lying on Highway 99. Smaller in size, though fairly independent of Dinuba, is the town of Orosi, directly to the east. Selma, Parlier, and Sanger are towns of comparable size within a radius of 12 miles. There are numerous subcommunities or neighborhoods near Dinuba, some within the Dinuba boundaries and some outside them. Sultana and North Dinuba are in the former category, while Cutler, Yettem, and Orange Cove are important small centers just outside the boundaries of Dinuba, as delineated.

The soils around Dinuba are generally of good quality. About 6 miles south of Dinuba are some poor salt grasslands which are used almost exclusively for grazing stock. In this area there are few houses. In all other directions from Dinuba, intensive agriculture extends unbroken until the orbit of a neighboring community is reached.

Dinuba, like Arvin, lies on the flat plain of the San Joaquin Valley. It, too, is close to the foothills, being but 3 miles from the nearest promontory. The soils are especially suited for the development of grapes, but appear to be excellent as well for numerous field crops including cotton. The growing season is long and the same general climate as in Arvin prevails except that there is a slightly greater rainfall and shorter growing season. Since crops are irrigated, precipitation is not a direct advantage, while the later spring means that Dinuba growers cannot bring their produce to market as early as Arvin growers can. Early markets are not important to raisin production, and Dinuba is in an area favorable to field-drying grapes because of the dry and warm (but not too hot) season after the grapes are ripe.

HISTORY

The Dinuba area produced grain during the seventies and eighties. At that time the dominant community was Traver, which served as the shipping point for the grain and the residence for laborers. Dinuba did not exist at that time. Early descriptions of Traver indicate that it was typically "wild west," and that it was apparently destined to be one of the major cities of the San Joaquin Valley. The irrigation development which was to be the basis of Traver's further development proved its undoing and created Dinuba.

During the seventies there was a large cattle and grain ranch in southern Fresno County which used the brand "76." In 1882 a group of men, including the owners of the "76" ranch, started an irrigation development called the 76 Ranch & Water Co. According to Frank Adams, this company was successful from the start.[4] It sold both land and water rights, the latter being made appurtenant to the land, each 40-acre right calling for 40 inches of water. An initial charge of $200 was made for each 40-acre right and an annual assessment of $20 covered operation and maintenance. The individual owner had to build adequate laterals when these were necessary to bring the water to his land.

The Alta Irrigation District was formed in 1888, and is one of three original Wright Act irrigation districts that have been continuously active since their formation. In 1890 the district purchased the system built by the "76" company for $410,000.

The district has been involved in much litigation, and disputes over water rights have in the past resulted in violence. Adams describes some of its problems:

> From the early days Alta Irrigation District was involved in litigation respecting its water rights. There was also litigation regarding the legality of certain acts of the board of directors, the first bond issue, out of which the system was purchased, being declared void by the superior court on August 18, 1898, when bonds of this issue in the amount of $543,000 were outstanding. These were the dark days of the district. For several years most of the district assessments remained unpaid and development was halted, although the canal system was continued in operation and the district organization remained more or less active. In 1901 a compromise with the bondholders was reached. Under this compromise 5-percent refunding bonds in the amount of $500,000 were issued on February 4, 1902, $492,000 of these being used to redeem all of the outstanding bonds and the defaulted interest coupons for the years 1898, 1899, and 1900. The basis for exchange was $0.75 on the dollar. Since this refunding, the district has been in sound financial condition, meeting all interest and principal payments as due, and even retiring bonds in the amount of $53,500 in advance of maturity out of accumulated surplus.[5]

In 1888 the towns of Reedley and Dinuba were formed. Irrigation of the higher lands around Dinuba flushed alkali to the surface of the soil aroud Traver, and this, in conjunction with a number of fires, caused the earlier town to be abandoned. Several houses and buildings were moved from Traver to Dinuba, and quite a few of the people of Traver established residence in the new community. With this start, the town grew steadily.

There had been rural schools within the community boundary (as delineated) as early as 1879, but the first Dinuba school was started in 1889. This school grew steadily through the nineties.

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[4] Frank Adams, Irrigation Districts in California, Bull. 21, 1929, State of California, Department of Public Works, Sacramento, 1930, p. 214.

[5] Frank Adams, ibid.

In 1899 a high school was established. During these early years additional land was constantly being brought under irrigation, and the creation of small farming units continued. By 1900 there were three general stores, a furniture store and funeral parlor, a newspaper, one or two doctors, a hotel, two smithies, two livery stables, and a packing shed. A basis for social participation was also established, with at least three churches, a community hall in which groups could meet and amateur theatricals were performed, and a public park in which regular band concerts were given. The reverse of this bright coin of the gay nineties was a "Chinatown," with its saloon and red-light district.

Dinuba was incorporated in 1906, and since that time has had its own local government. A second newspaper was started in 1903, a water system was developed the same year; the year before that a bank was set up by local capital, and in 1910 a second bank was organized. In 1915 the first general large public-works development was undertaken.

During the First World War prices were good and prosperity was general, and after the war there was a great boom. The population grew to an all-time peak in 1922. The average daily attendance in the several elementary schools shot from 700 to 1,250 during the 4 years 1918–22. It was during this postwar period, when the price of raisins was good, that the townspeople thought that their community would develop into a major urban center. The farmers overexpanded on the basis of these prices, the city made elaborate improvements which eventually created burdensome assessments on real estate but which had the immediate effect during the construction period of furthering the inflationary economy.

At this time the town had a professional baseball team and a well-paid full-time chamber of commerce secretary. The community had enjoyed high prices and exuberant prosperity, and the people acted as if it were a permanent expectation.

In 1922 the situation changed; many small fortunes and many small savings were lost. The farmers who had mortgaged their home farms for an extra piece of land often lost both; people who had built homes in town had to pay high construction costs and higher tax assessments for paving, lighting, and the civic improvements. The population declined rapidly, so that the average daily attendance at the schools was reduced from the 1922 peak of 1,250 back to 1,000 in 1926, and it remained under 1,100 for the next 10 years. During this period both banks closed and were taken over by chain systems, and the financial position of the community was very low. Dinuba was then "the best-lighted cemetery ever seen," according to drummers.

In 1937 the town reorganized its finances, and economic conditions are much improved. At present, the high prices have brought on another boom period, but the chastened community, like the chastened farmer, has carefully avoided overexpansion, but is preparing for post-war improvements on a modest scale. Though it was not without individual heartaches and losses, the community has come through the war and depression in good order and now has many civic advantages and practically no debt.

The land of Dinuba was owned in large tracts prior to irrigation development, but the owners, over a period of years, sold off their holdings in small units. In this way the community was built upon small farm operations, though a few big operators have always existed in the area. Though it is impossible to determine all the reasons for the development of small holdings, some of the important ones can be indicated. The Alta irrigation system was developed in the early period of California fruit production and, though large-scale field operations were prevalent in California, large-scale fruit operations were not then frequently attempted. It seems that the landowners considered their best opportunity to be in the profits from direct sales at the enhanced land values, rather than the more speculative operation in the new industry. Land costs were high at the very beginning of the development. A significant item in the predominance of small-scale operations is the fact that the land was developed by irrigation under the Wright Act, an act which was purposely drawn to assist the development of small farming. Some large growers have always farmed in the area, though none on the scale of the largest Arvin operations.

No adequate picture of the size of farms throughout Dinuba history is available, but in recent years some large-scale operations have developed. These have been created by the consolidation of holdings by packers and shippers, motivated by a desire to integrate their activities sufficiently to enable them to be assured of an adequate pack.

During the last 15 years successful packers have gradually increased their holdings. One of these operators was quoted as saying that by having holdings and a packing shed in combination he could make money when the small farmer could not. This could be accomplished by means of three advantages: (1) Growing a premium quality which brought 10 cents more per pack, (2) saving 5 cents per pack on commission, and (3) avoiding the direct packing charges. He considered he made $250 per car more than the farmers did, and is assured of 200 cars per season through his own production.

The development of these integrated operations is viewed with some alarm by the small growers, who recognize that in times of unfavorable prices the packers can refuse to handle the independent operator's produce. Large-scale operations may become important in Dinuba but are not now, nor have they been a dominant factor in the community since the development of irrigation.

COMPARATIVE NOTES

The geographic bases of Arvin and Dinuba are quite similar. Both are surrounded by flat lands with good to moderately good soils capable of growing fruits and vegetables with good yields and quality, when supplied with adequate irrigation water (table 3). Arvin, however, has more good soil within the area, and is much less hemmed in by rival communities. Neither town has any great advantage with respect to climate. Arvin's is slightly favorable in that it can produce for an earlier market while Dinuba has a climate peculiarly advantageous to raisin production. Neither has any great advantage with respect to location. Dinuba is somewhat more central to the traffic within the State, and is slightly better supplied with railroad facilities; but Arvin is better located with respect to urban and eastern markets. Potential and actual oil deposits give an economic advantage to

Arvin over Dinuba, but this is not of sufficient importance to account for any great divergence between the two towns.

TABLE 3.—*Quality of soil in Arvin and Dinuba*

Soil class	Arvin		Dinuba	
	Acres	Percent	Acres	Percent
1 and 2	33,348	52.5	23,186	54.8
3	25,408	40.0	7,827	18.5
4	4,764	7.5	4,950	11.7
5 and 6	0	0	6,347	15.0
Total	63,520	100.0	42,310	100.0

Source: Data obtained by planimeter readings from soil map of each community as delineated. Soil map prepared by Bureau of Agricultural Economics, based upon soil-classification map by Walter W. Weir and R. Earl Storie, Division of Soil Technology, University of California.

The greatest differences between the two communities, other than the differential in size of farm operations, are the nature and cost of water supply and the history and age of the communities. Arvin is completely dependent upon ground waters for irrigation, while Dinuba secures the major portion of its supply as surface irrigation by a diversion from the Kings River, and uses ground water only as a supplement. A careful analysis of cost of water under average conditions in the two communities shows that water costs more in Arvin than Dinuba (table 4). The cost analysis, made for farms of the average size in each community, shows that the average per acre cost of water in Arvin is $6.92 (2 feet 11 inches duty) and Dinuba is $4 (2 feet 6 inches duty). While this difference is not great, compared with the total annual cost of land, the difference would be very great between Arvin and Dinuba for farms of similar size. Arvin units of 57 acres would pay over $14 per acre for water. Such excessive water costs can be and regularly are avoided by cooperative use of wells and pumps, either between two or three neighbors or among a large group.

TABLE 4.—*Comparative irrigation costs: Arvin and Dinuba*

Item of cost	Arvin		Dinuba, 57-acre farm basis
	497-acre farm basis [1]	57-acre farm basis [2]	
Total investment	$13,500.00	$3,700.00	$1,200.00
Annual costs:			
Fixed costs [3]	1,404.00	385.00	159.00
Repair and emergency	120.00	40.00	8.00
Electric energy	1,915.00	384.00	61.00
Total annual costs	3,439.00	809.00	228.00
Investment per acre	27.00	65.00	21.00
Annual cost per acre	6.92	14.19	4.00
Annual cost per acre-foot	2.37	4.87	1.60

[1] Average farm size in Arvin.

[2] 57 acres is the Dinuba average farm size.

[3] Includes interest and depreciation at 5 percent each, tax of 4 mills, and for Dinuba a charge for gravity water delivered at 60 cents per acre.

For more detailed analysis of water costs, and for sources and necessary assumptions, see appendix B.

There is a general attitude in Arvin that water cannot be developed by the small operator because of the very large capital outlay. However, three items should be borne in mind. First, the water table was around 50 feet when the land was first brought into production, a lift that is not out of line with water lifts in other areas. Second, there are small units in the area which have been farmed continuously for a quarter of a century. These usually obtain water under some form of cooperative arrangement that enables several units to share the investment and pumping charges. Finally, the cost of water is an item which is reflectd in the value of land, since land values are based upon the capitalized potential net income. High water costs do not render small farming impossible, yet it must be recognized that the great expense and the resulting high risk in the development of Arvin lands, together with the cultural inertia in forming cooperative arrangements, serve to inhibit the growth of small farming. Therefore, while small farming is feasible and profitable, with proper price relationships, the economics of the Arvin situation under present conditions militate against the development of the family farm and in favor of corporation agriculture.

The historical differences between the two communities may be examined under two phases: the age of the communities, and the era of the communities. Dinuba is approximately 20 years older than Arvin, and reached its population maturity during the early 1920's. Arvin cannot yet be called a mature community, since there is a great deal of land being developed. The relative age of the two towns is shown by the growth of the annual average daily attendance of the elementary schools in the area. The first Dinuba area school started in 1879, while the first school in the Arvin area began in 1902. The growth curve in the two areas shows a remarkable parallel development, with slow growth during the first 15 years, rapid growth for the next 20, followed by a cessation of growth in later years. The growth period in Arvin shows a somewhat sharper ascent (fig. 21). The period in which a community comes into being affects its character. Arvin grew up after World War I and Dinuba before it. This has had certain direct effects; for instance, a small town which came into being during the 1920's would rarely have two banks, because chain banking became prominent in California during that period and these are in a position to avoid such a situation. On the other hand, the increased use of automobile traffic, and the assistance furnished by the Federal Government through WPA would suggest that streets would be paved and sidewalks laid relatively earlier in the newer town than the older. A detailed analysis of the effect of the historical differences between Arvin and Dinuba will be presented in a later section.

CHAPTER III

AGRICULTURE IN ARVIN AND DINUBA

INTRODUCTION

California agricultural production is industrialized. Its major characteristics are high degree of specialization on the farm; general use of power equipment; high value and intensive use of land; large capital requirements; and heavy dependence upon hired labor. Both Arvin and Dinuba fit this pattern. Furthermore, most of the same commodities are produced, but they are produced in different proportions. Finally, the scale of operations differs, for while both communities have a wide range of farm size, the farms at Arvin are generally larger while those in Dinuba are mostly of very moderate size. In order to understand the nature of the economic and social conditions, it will be necessary to examine the agriculture of each community in detail.

From the standpoint of community comparisons, the most significant fact is that the same total dollar volume of agricultural production—2½ million dollars—was brought to the market in Arvin and in Dinuba.

Special data have been available on the agriculture of the two communities. Statistical data on size and type of farm, on tenure, and on acreage in various major crops have been obtained from the worksheet records of the Agricultural Adjustment Agency. These data have been developed by the Bureau of Agricultural Economics for use in other studies relative to the economic effects of scale of farm operation, and the data cover three counties in the upper San Joaquin Valley.[6] While only worksheet farms of the Agricultural Adjustment Agency were included, this is very nearly all farms in the area. Actually more units were included than were included by the United States Census of Agriculture. Furthermore, some indication of the accuracy of these sources is shown by the agreement between the Agricultural Adjustment Agency data and the schedule data from each community (table 5). The Arvin agreement is nearly perfect, while in Dinuba the questionnaire included 90 percent of the number enumerated by the Agricultural Adjustment Agency records.

TABLE 5.—*Comparison of number of farm operators as reported in Agricultural Adjustment Agency records and as indicated by schedules*

Community	Number of Agricultural Adjustment Agency operating units	Number of farm operators on basis of questionnaire
Arvin	133	140
Dinuba	722	656

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[6] For the detailed analysis and a discussion of the methods of collecting this information, see Edwin E. Wilson and Marion Clawson, Agricultural Land Ownership and Operation in the Southern San Joaquin Valley. Bureau of Agricultural Economics, Berkeley, 1945 (mimeographed). These data also entered into the analysis of the scale of farm operations. (See J. Karl Lee, Relative Efficiency of Farms of Varying Size in the Southern San Joaquin Valley, California, Bureau of Agricultural Economics, 1945.)

The Agricultural Adjustment Agency crop and type of farm data relate to 1940. The use of 1940 rather than a later year was dictated by considerations outside the scope of this study, but its effects must be recognized. The differences between 1940 and 1944 agriculture are not significant in Dinuba, where most land has been in intensive production for a long time and much of it is in permanent plantings. A slight shift from grapes into commercial vegetables has occurred. Expansion is no longer possible, since all good lands have long been intensively farmed. In Arvin the agriculture has changed measurably. In about 1937 a development started which brought about 11,000 acres into production by 1940 and which has continued at approximately the same rate since then. Much of this new land was shifted from dry-farmed grain to irrigated potato and other row-crop production, while some shifted directly from desert to intensive uses. Probably about 6,000 acres of land were brought into intensive use for the first time during the 3 years 1941–43 inclusive. It must be noted that population and other social data refer to 1944, business data to 1943, while agricultural production data refer to 1940. This means that the production base supporting Arvin's population and business at the time for which data in these categories apply are underestimated. The 3- to 4-year offset is more than enough to account for any expected lag in volume of business or in population growth. Arvin's population, as indicated by school enrollment, shows no gain since 1940.

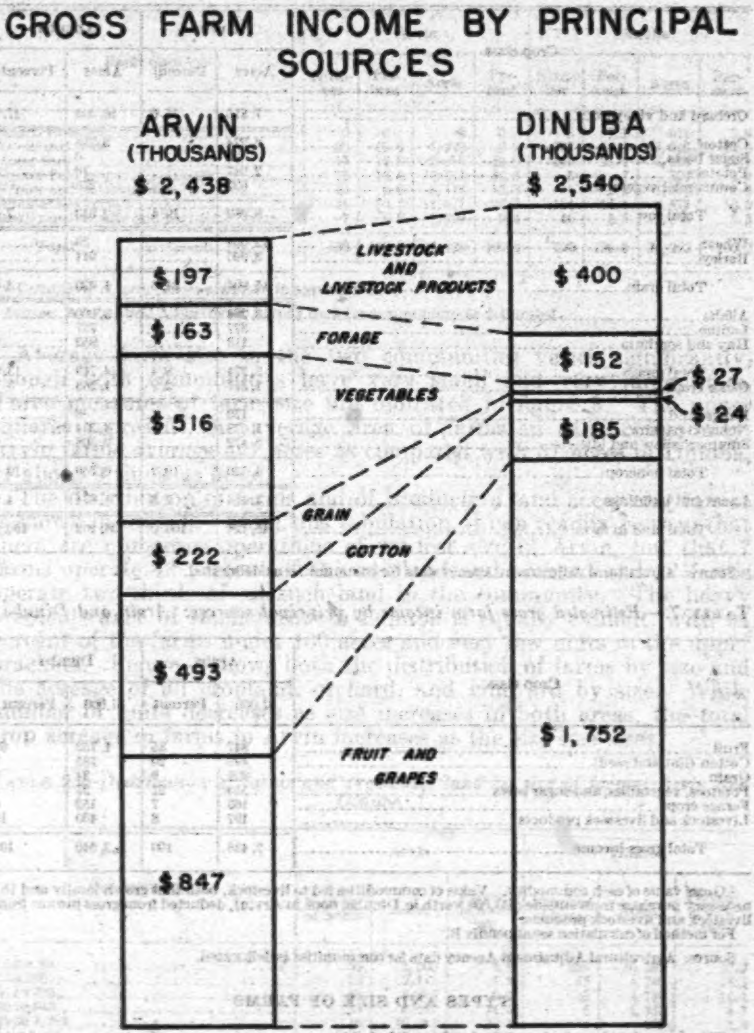
VOLUME OF PRODUCTION AND MAJOR CROPS

The acreage distribution in the two communities and the proportion of total acreage by major crop classes are given in table 6. There were 46,126 acres in farms in Arvin as against 34,202 in Dinuba (1940). If grain and idle or unused lands are excluded, there are 22,000 acres in Arvin compared to 24,000 acres in Dinuba. The following are the major intensive land uses in Arvin and Dinuba:

Intensive land uses	Arvin	Dinuba
	Percent	*Percent*
Orchard and vineyard	36	[illegible]
Row crops	41	[illegible]
Forage crops	17	[illegible]
Other intensive uses	6	[illegible]
Total	100	[illegible]

This emphasizes the major difference between the two communities namely, the heavy dependence of Dinuba upon one category (and i fact, upon grapes alone), in contrast to the balance in Arvin betwee fruit and row crops.

An estimate has been made of the gross farm income, based upo local yields and acreages. The total income in 1940 was approxi mately 2½ million dollars in each of the two communities. Table shows the distributions of this income by major commodity classe and the same information is presented graphically in figure 2. Thi demonstrates again the great value of fruit in Dinuba while the ro crops make up but a small total value. These latter have becom more important in both communities during the last 3 years, but the are still but a small proportion of the total value of the Dinub production.



SOURCE: AGRICULTURAL ADJUSTMENT AGENCY RECORDS AS ANALYZED BY BUREAU OF AGRICULTURAL ECONOMICS. DATA REFERS TO 1940 CROP YEAR FOR ARVIN AND DINUBA AS DELINEATED FOR COMPARATIVE COMMUNITY STUDY. DOLLAR VOLUME OF PRODUCTS ESTABLISHED BY USING 1940 PRICE LEVELS AND AVERAGE YIELDS

FIGURE No. 2

TABLE 6.—*Major crop classes in Arvin and Dinuba, 1940*

Crop class	Arvin		Dinuba	
	Acres	Percent	Acres	Percent
Orchard and vineyard	7,875	17.0	16,295	47.7
Cotton	6,274		2,358	
Sugar beets	32		0	
Potatoes	2,047		10	
Commercial vegetables	627		278	
Total row	8,980	19.4	2,646	7.7
Wheat	12,004		76	
Barley	3,990		944	
Total grain	15,994	34.6	1,020	3.0
Alfalfa	3,284		3,060	
Ladino	377		737	
Hay and sorghum	113		952	
Total forage	3,774	8.4	4,749	13.9
Other crops	1,317	2.9	1,268	3.7
Range land	170		8	
Noncrop pasture	1,078		4,234	
Summer fallow and idle	3,472		2,308	
Total noncrop	4,720	10.2	6,550	19.1
Lanes and buildings	3,464	7.5	1,674	4.9
Total land in farm	46,124	100.0	34,202	100.0

Source: Agricultural Adjustment Agency data for communities as delineated.

TABLE 7.—*Estimated gross farm income by principal sources: Arvin and Dinuba*[1]

Crop class	Arvin		Dinuba	
	$1,000	Percent	$1,000	Percent
Fruit	847	35	1,752	69
Cotton (lint and seed)	493	20	185	7
Grain	222	9	24	1
Potatoes, vegetables, and sugar beets	516	21	27	1
Forage crops	153	7	152	6
Livestock and livestock products[1]	197	8	400	16
Total gross income	2,428	100	2,540	100

[1] Gross value of each commodity. Value of commodities fed to livestock, both that grown locally and the necessary purchase from outside ($51,000 worth in Dinuba, none in Arvin), deducted from gross income from livestock and livestock products.

For method of calculation see appendix B.

Source: Agricultural Adjustment Agency data for communities as delineated.

TYPES AND SIZE OF FARMS

The analysis of the Agricultural Adjustment Agency data segregated all farms into 10 major classes. Table 8 shows the number of farms and the acreage in each class. Detailed description of these classes appears in appendix B. The summer-field-crop farms, and to a lesser extent the summer-and-winter-field-crop farms, produce most of the cotton, potatoes, and vegetables. Fruit ranches are broken into two categories on the basis of degree of specialization.

TABLE 8.—*Number of farms and acreages, classified by type: Arvin and Dinuba, 1940*

Farm class [1]	Arvin				Dinuba			
	Number	Percent	Acres	Percent	Number	Percent	Acres	Percent
Forage livestock	0	0	0	0	8	1.1	611	1.8
Specialized fruit	30	22.6	1,229	2.7	397	55.0	14,916	43.6
Major fruit	17	12.8	9,055	19.6	152	21.1	8,012	23.4
Winter field crops	25	18.8	16,762	36.3	5	.7	330	1.0
Winter and summer field	13	9.8	6,118	13.3	16	2.2	1,995	5.8
Summer field crops	41	30.7	11,871	25.7	104	14.4	6,473	18.9
Small ranches, idle and part-time farms	7	5.3	1,090	2.4	40	5.5	1,866	5.5
Total	133	100.0	46,126	100.0	722	100.0	34,202	100.0

[1] Definitions of farm classes are given in appendix B.

Source: Agricultural Adjustment Agency data for communities as delineated.

Average farm size in the two communities varies significantly, though both communities have very small and very large units. Three measures of farm size are indicated in figure 3. The upper squares represent the average area of farms in each community. Arvin farms average 497 acres as compared with 57 acres in Dinuba, or about 9 times as large.

The distribution of farms and of productive land according to size is shown in table 9. From this tabulation, it can readily be seen that there are numerous operations of modest size in Arvin, but that 7 farms operate 42 percent of the cropland and orchard and 22 farms operate two-thirds of all such land in the community. The heavy preponderance of small farms in Dinuba is equally evident, with 94 percent of the farms under 160 acres and very few units in the upper brackets. Figure 4 shows both the distribution of farms by size and the acreage of all cropland, orchard, and vineyard by size. While number of units decreases as size increases in both areas, the total crop acreage in farms in Arvin increases as the size increases.

TABLE 9.—*Distribution of farms and productive land by size of farms: Arvin and Dinuba*

Size category [1]	Arvin			Dinuba		
	Number of farms	Acres	Percent of acreage	Number of farms	Acres	Percent of acreage
Under 80	53	1,600	3.8	624	16,261	57.7
80 to 160	22	2,142	5.1	55	4,789	17.1
160 to 320	18	3,898	9.3	33	4,794	17.1
320 to 640	18	6,067	14.5	5	1,337	4.7
640 to 1,280	15	10,081	24.1	4	963	3.4
Over 1,280	7	17,983	43.2	1	[2] 8	[3] 0.0
Total	133	41,771	100.0	722	28,152	100.0

[1] Size category based upon acreage of cropland and orchard only.

[2] Acreage in large unit which only partially lies in community. [3] Amounts to less than 0.5 percent.

Source: Agricultural Adjustment Agency records.

Summer-field-crop farms tend to be larger than the average of all farms in the community, but the difference is not very great. In Dinuba about 70 percent are under 80 acres in size, as against 87 percent for all farms. In Arvin about 20 percent are in this small category and 35 percent are under 160 acres while 40 percent of all farms are under 80 and 55 percent under 160. Summer field crops are a somewhat less intensive operation than fruit, so that somewhat larger units would be expected.

Acreage in farms, and even cropland acreage as used above, is not an entirely satisfactory measure of farm size. An acre of wheat and an acre of grapes differ extremely in the amount of labor required, amount of capital invested, and potential income. In order to discuss farm size on a more comparable basis, a unit of measurement has been devised which expresses the potential income from an area of land. This unit has here been called an acre-equivalent (abbreviated A–E), and may be defined as that area of any cropland which under normal conditions has the potential capacity to return income equivalent to that of an acre of irrigated alfalfa. (See appendix B for method of calculation and factors used.) In terms of this measurement, the average farm unit in Arvin is 285 acre-equivalent units against 89 in Dinuba (fig. 3). Figure 5 shows the distribution of farms by size categories measured in acreage-equivalents. The heavy concentration of Dinuba units in the brackets between 50 and 200 units is clearly evident. In Arvin nearly half the farms are under 100 such units in size, though most of the acreage is controlled under farms of the larger categories.

The accompanying figures Nos. 3, 4, and 5 apply to farms as operating units. Since tenancy is prevalent, the same picture need not apply to farm ownership. Analysis has been made of ownership units, which may or may not be operated as one farm but which include all the lands within the community owned by one individual. There are 214 such units in Arvin with an average size of 176 acres, and 753 units in Dinuba with an average size of 45 acres.

TABLE 10.—*Number of ownership units and acreage by size of holdings: Arvin and Dinuba, 1940*

Size class	Arvin				Dinuba			
	Number	Percent	Acres	Percent	Number	Percent	Acres	Percent
0 to 80	100	46.8	3,463	9.2	668	88.7	19,088	56.3
80.1 to 160	49	22.8	7,466	19.8	42	5.6	4,675	13.8
160.1 to 640	52	24.3	11,696	31.0	38	5.0	7,063	20.9
640.1 and up	13	6.1	15,093	40.0	5	.7	3,040	9.0
Total	214	100.0	37,728	100.0	753	100.0	33,875	100.0

NOTE.—Where part of unit is held within community boundaries and part outside, acreage within boundaries only was included, but placed in size category based upon total holdings. Such situation reported for Arvin only.

Source: Agricultural Adjustment Agency data for communities as delineated.

Table 10 shows that nearly half the holdings in Arvin are under 80 acres but have only 9 percent of the land, whereas 30 percent of the farm holdings over 160 acres have 71 percent of the land. In Dinuba nearly 90 percent of all ownership units are less than 80 acres, and operate 56 percent of the land, while the small percent of the owners who have over 160 acres (5.7 percent) operate 30 percent of the land.

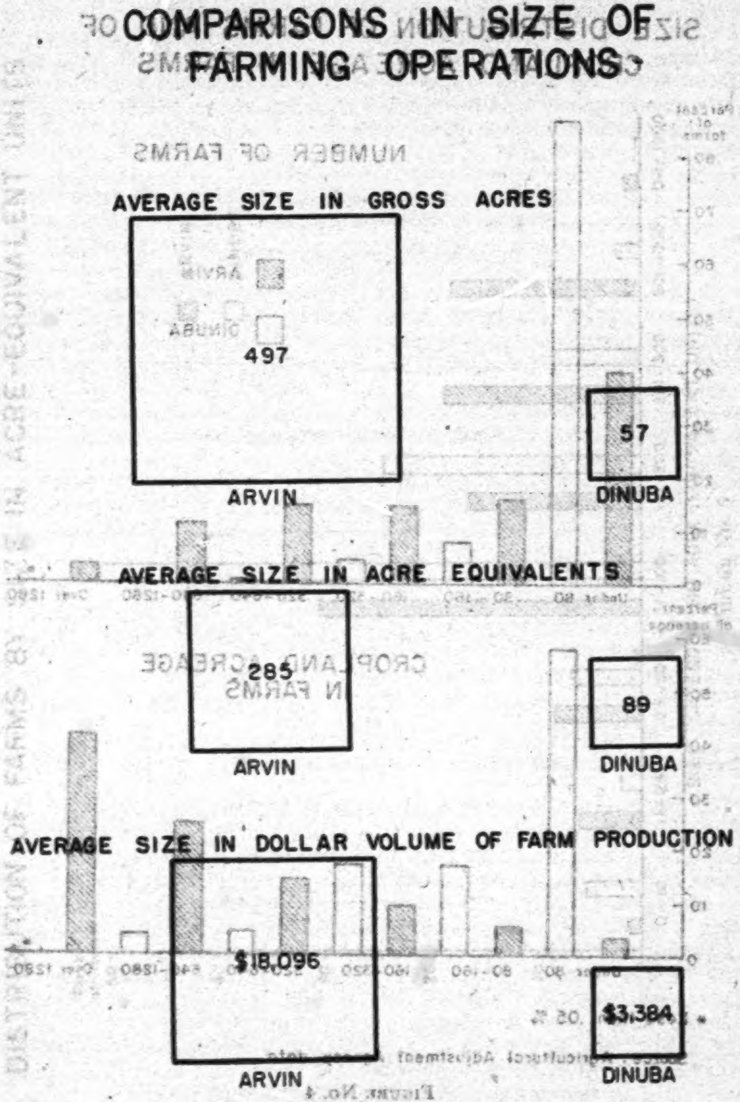
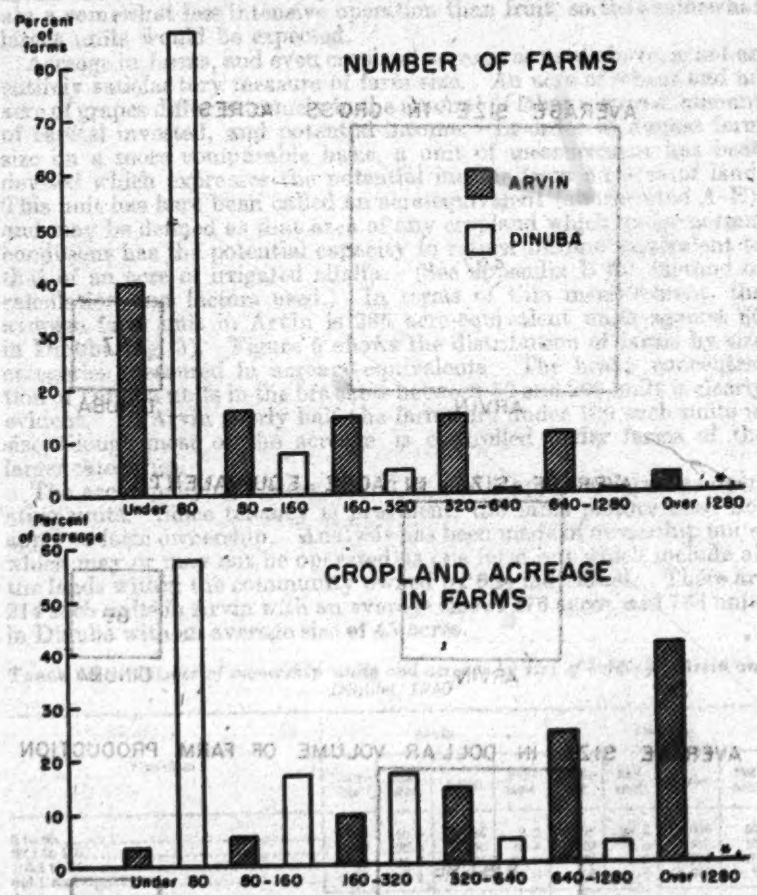

COMPARISONS IN SIZE OF FARMING OPERATIONS
AVERAGE SIZE IN GROSS ACRES
497
ARVIN
57
DINUBA
AVERAGE SIZE IN ACRE EQUIVALENTS
285
ARVIN
89
DINUBA
AVERAGE SIZE IN DOLLAR VOLUME OF FARM PRODUCTION
$18,096
ARVIN
$3,384
DINUBA

FIGURE No. 3



SIZE DISTRIBUTION OF FARMS AND OF CROPLAND ACREAGE IN FARMS

NUMBER OF FARMS

CROPLAND ACREAGE IN FARMS

* Less than .05 %

Source: Agricultural Adjustment Agency data

FIGURE No. 4

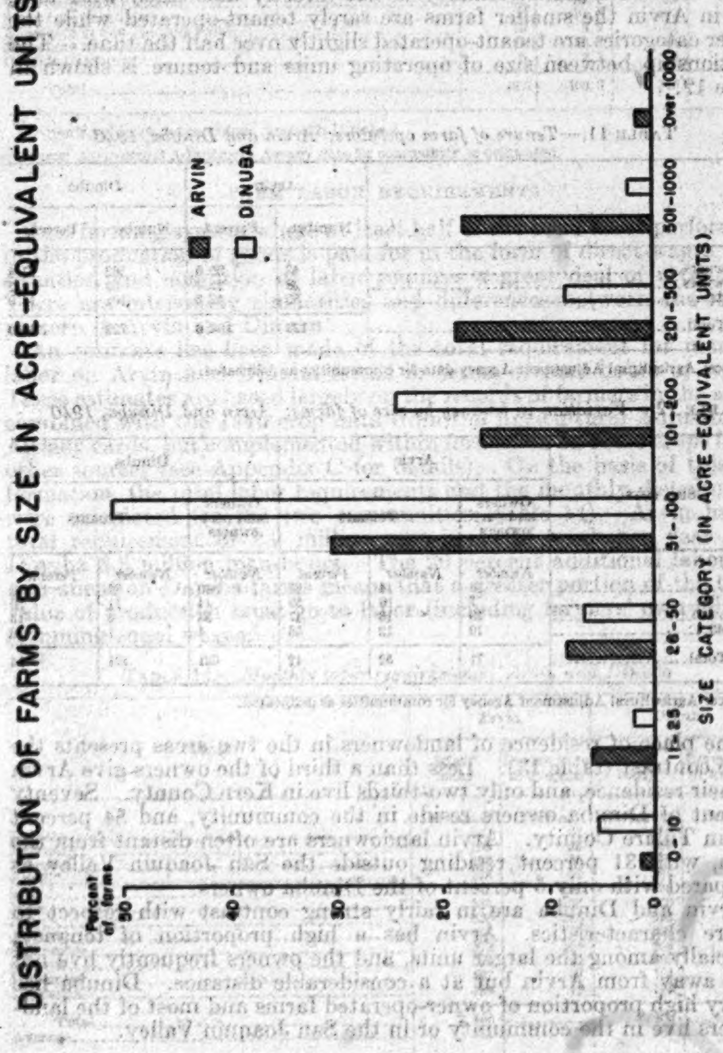

DISTRIBUTION OF FARMS BY SIZE IN ACRE-EQUIVALENT UNITS
ARVIN
DINUBA
Percent of farms
50
40
30
20
10
0
0-10
11-25
26-50
51-100
101-200
201-500
501-1000
Over 1000
SIZE CATEGORY (IN ACRE-EQUIVALENT UNITS)

FIGURE No. 5

FARM TENURE

More than three-fourths of Dinuba farmers own all the land they operate, while only 35 percent of the Arvin farmers are full owners. The proportion of full owners, part owners, and tenants is shown in table 11. In Dinuba, tenancy is not directly associated with size, but in Arvin the smaller farms are rarely tenant-operated while the larger categories are tenant-operated slightly over half the time. The relationship between size of operating units and tenure is shown in table 12.

TABLE 11.—*Tenure of farm operators: Arvin and Dinuba, 1940*

	Arvin		Dinuba	
	Number	Percent	Number	Percent
Full owners	43	35.0	562	77.8
Part owners	28	22.7	60	8.2
Tenants	52	42.3	101	14.0
Total	123	100.0	722	100.0

Source: Agricultural Adjustment Agency data for communities as delineated.

TABLE 12.—*Variation in tenancy by size of farms: Arvin and Dinuba, 1940*

Size, class	Arvin			Dinuba		
	Owners and part owners	Tenants		Owners and part owners	Tenants	
	Number	*Number*	*Percent*	*Number*	*Number*	*Percent*
0 to 80	36	14	28	540	84	13
80.1 to 160	7	10	59	44	11	20
160.1 to 640	18	16	47	33	5	13
Over 640	10	12	55	4	1	20
Total	71	52	42	621	101	14

Source: Agricultural Adjustment Agency for communities as delineated.

The place of residence of landowners in the two areas presents the same contrast (table 13). Less than a third of the owners give Arvin as their residence, and only two-thirds live in Kern County. Seventy percent of Dinuba owners reside in the community, and 84 percent live in Tulare County. Arvin landowners are often distant from the town, with 31 percent residing outside the San Joaquin Valley as compared with only 5 percent of the Dinuba owners.

Arvin and Dinuba are in fairly strong contrast with respect to tenure characteristics. Arvin has a high proportion of tenancy, especially among the larger units, and the owners frequently live not only away from Arvin but at a considerable distance. Dinuba has a very high proportion of owner-operated farms and most of the landowners live in the community or in the San Joaquin Valley.

TABLE 13.—*Residence of landowners: Arvin and Dinuba, 1940*

Residence of owner	Arvin		Dinuba	
	Number	Percent	Number	Percent
With community address	60	32.1	529	70.7
Elsewhere in county	59	31.6	101	13.5
Elsewhere in San Joaquin Valley	10	5.3	81	10.8
Elsewhere in California	53	28.3	34	4.5
Outside California	5	2.7	4	0.5
Total [1]	187	100.0	749	100.0

[1] Owner's residence not recorded: Arvin 27; Dinuba 4.

Source: Agricultural Adjustment Agency data for community as delineated.

FARM LABOR REQUIREMENTS

In a farming system where at least half of the total labor performed in the production of goods is paid for in the form of direct wages, the situation and condition of labor requires a great deal of attention. There are interesting similarities and differences between the labor pattern in Arvin and Dinuba.

An estimate has been made of the total requirement for manual labor on Arvin and Dinuba farms in terms of man-hours of work. These estimates are based largely on the records of farmers in the area, combined with the 1940 crop data from the Agricultural Adjustment Agency cards, but complemented with information on some crops from other sources (see Appendix C for details). On the basis of this information, the total labor requirements and the monthly distribution were calculated for the two communities (table 14). Arvin has a total requirement of 2.9 million man-hours of work per year and Dinuba 3.5 million man-hours. The 20 percent additional labor requirement on Dinuba farms means that a greater portion of the total value of production must go to labor (including farmers' own labor), assuming equal wages.[7]

TABLE 14.—*Monthly labor requirements: Arvin and Dinuba*

Month	Arvin		Dinuba	
	Man-hours	Percentage of average	Man-hours	Percentage of average
	Thousands	*Percent*	*Thousands*	*Percent*
January	140	58	189	65
February	126	52	243	84
March	133	55	227	79
April	219	91	268	93
May	245	102	234	81
June	300	125	250	87
July	525	218	396	138
August	151	63	300	104
September	372	155	663	231
October	294	122	352	123
November	137	57	134	47
December	189	78	175	61
Total	2,890		3,439	
Average	241	100	287	100

For methods of computation, source of data, and detailed analysis see appendix C.

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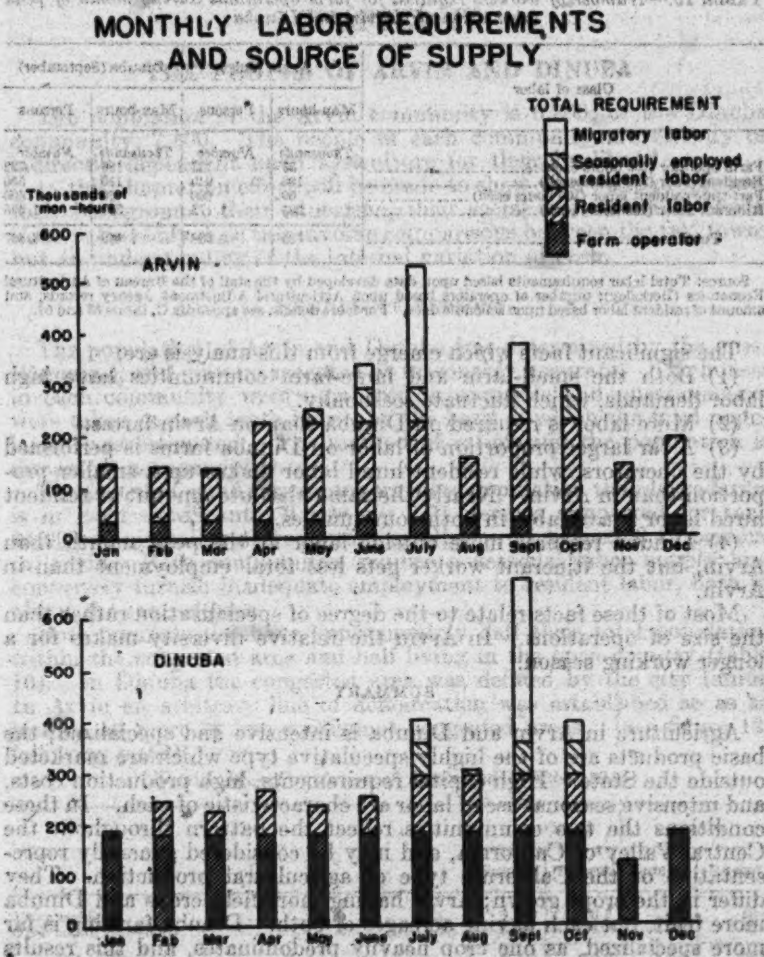
[7] The analysis of farm efficiency made by Karl Lee (op. cit.) shows that a greater amount of labor is required per acre and per unit of production on small farms than on large. Smaller units, according to this same study, are more intensively operated.

The seasonal fluctuation in labor requirement is great in both communities. Arvin demand varies from 132,000 hours in March to 525,000 hours in July (or four times the minimum). Dinuba demand for labor varies from 124,000 hours in November to 669,000 in September (over five times the minimum). Seasonality of employment opportunity is a serious problem in both towns, but is worse in Dinuba than Arvin.

These figures represent labor requirements on all farms, or the demand for labor. On the supply side, several classes of labor may be segregated: The farm operator, the resident full-time farm laborer, the resident part-time worker, and the outside transient worker. It may be assumed that, in general, the labor is performed by the operator when he can do it, by resident labor when there is too much for the operator, and by part-time and migratory workers only after the resident labor is fully employed. In actual practice, there will be many exceptions, but as a general rule this relationship will apply. In this way, the itinerant worker will receive the residual employment. It must be remembered that the resident laborer of Arvin and Dinuba may also be an itinerant laborer in any other community, while the itinerant laborer is the resident of some other town.

Figure 6 shows graphically the monthly fluctuation in labor demand for the two towns, and the proportion of this demand which must be filled by hired labor and by migrant workers living outside the community. Hatchures show the source of such labor. The lower portion represents the labor performed by the farm operators, on the assumption that each operator works full time (250 hours per month) when there is work to be done. Since many operators, especially on larger units, are occupied with management, this may overstate somewhat the actual hours of labor they can accomplish. It is assumed that this managerial function results in at least equivalent labor savings. Unpaid family labor has not been included as it does not play an important role in the economy of industrialized farming. The next section of the bar shows the work done by full-time hired labor resident in the community. The supply is predicated upon the data from schedules. The third section shows other family members who perform farm labor for wages on a part-time basis, the supply of which was determined by the schedules. Full-time labor is assumed to work 200 hours per month when work is available and part-time labor 100 hours per month when work is available. In Dinuba, no hired labor is required in November or December, but in Arvin there is always work for some hired hands. The resident labor in each community is sufficient to cover most of the demand. In both communities outside workers are necessary during the three peak months.

No doubt outside workers are normally in each community at other times, competing with local labor, but they are not absolutely needed. The upper portion of the bar represents that portion of the available work which must be done by these itinerant workers. Table 15 shows the break-down of workers for the two communities for the month of peak employment, based upon the assumption given. During other months, the number of itinerant workers is fewer, and during most months, even the resident labor is not fully employed. In Dinuba there are seasons when the operators are themselves not fully employed.



MONTHLY LABOR REQUIREMENTS AND SOURCE OF SUPPLY

For assumptions and explanations see Appendix B

FIGURE No. 6

Arvin requires approximately 1,200 workers, Dinuba 1,400 in the peak months. Dinuba can furnish this class of workers about 20 percent more total employment.

TABLE 15.—*Number of workers required for farm operations during month of peak labor demand; Arvin and Dinuba*

Class of labor	Arvin (July)		Dinuba (September)	
	Man-hours	Persons	Man-hours	Persons
	Thousands	*Number*	*Thousands*	*Number*
Farm operator (250 hours each)	33	132	180	722
Resident labor (200 hours each)	189	946	110	550
Part-time resident labor (100 hours each)	69	690	60	600
Itinerant labor (200 hours each)	235	1,175	319	1,595
Total	525	2,943	669	3,467

Source: Total labor requirements based upon data developed by the staff of the Bureau of Agricultural Economics (Berkeley); number of operators based upon Agricultural Adjustment Agency records; and amount of resident labor based upon schedule data. For more details, see appendix C, tables 53 and 54.

The significant facts which emerge from this analysis are:

(1) Both the small-farm and large-farm communities have high labor demands, which fluctuate seasonally.

(2) More labor is required on Dinuba than on Arvin farms.

(3) A far larger proportion of labor on Dinuba farms is performed by the operators, while resident hired labor makes up a smaller proportion than in Arvin. Nearly the same absolute amount of resident hired labor is available in both communities.

(4) Dinuba requires more outside labor at the peak month than Arvin, but the itinerant worker gets less total employment than in Arvin.

Most of these facts relate to the degree of specialization rather than the size of operations. In Arvin the relative diversity makes for a longer working season.

SUMMARY

Agriculture in Arvin and Dinuba is intensive and specialized; the basic products are of the highly speculative type which are marketed outside the State. High capital requirements, high production costs, and intensive seasonal use of labor are characteristic of each. In these conditions the two communities reflect the pattern throughout the Central Valley of California, and may be considered generally representative of the California type of agricultural production. They differ in the crops grown; Arvin having more field crops and Dinuba more fruit, but each having acreages of both. Dinuba farming is far more specialized, as one crop heavily predominates, and this results in higher seasonal labor requirements, though not in significantly different requirements for outside labor.

CHAPTER IV

THE PEOPLE OF ARVIN AND DINUBA

The population of the Arvin community is 6,200; of the Dinuba community, 7,400. The people in each community are directly or indirectly dependent upon agriculture for their livelihood.

In this chapter an effort will be made to show who these people are, their background, their education, their social and economic conditions. Not only does this involve comparisons between the two towns but an understanding of the internal variation of each.

NUMBER OF PERSONS

The population of Arvin and Dinuba was determined by the questionnaires, and may be accepted as reasonably accurate. The houses in each community were numbered in sequence and questionnaires were taken at each tenth house, on the basis of which the total population was estimated. The method of estimating the population is discussed in appendix D.

The fact that small farms support more population than large farms is in itself significant. There are 3.01 persons supported for each $1,000 of agricultural production in Dinuba as against 2.45 persons in Arvin. Both communities require a seasonal labor supply and conversely furnish inadequate employment to resident labor, both in about the same degree.

Both communities have approximately half their total population within the congested area and half living in the open country (table 16). In Dinuba the congested area was defined by the city limits. In Arvin an arbitrary line of demarcation was established so as to include all more or less contiguous congested areas. (See figure 12, following p. 52).

TABLE 16.—*Population of Arvin and Dinuba, 1944*

	Arvin		Dinuba	
	Number	Percent	Number	Percent
Town residents	3,139	50.3	3,750	50.6
Open country residents	3,097	49.7	3,654	49.4
Total population	6,236	100.0	7,404	100.0

Source: Schedule data.

Both communities are predominantly of the white race. The schedules show 85 percent of the family heads are native-born whites in Arvin, 6 percent are Mexicans, 3 percent Negroes, and 2 percent European-born. In Dinuba, 81 percent were native-born white, 7 percent Mexican, and the remainder were persons from different parts of Europe, including Italy, Portugal, Poland, Germany, Yugoslavia, and Russia. The largest single group of foreign-born whites were Armenians with eight families recorded (4 percent of the schedules). One Negro, one Korean, and one Chinese were found in the sample. A group belonging to the Mennonite Church, while not a separate racial or nationality group, have such cultural homogeneity that they should be segregated from the rest. The 17 families classified in this category, mostly American-born, represent 8 percent of the total Dinuba population.

The racial characteristics of the two communities are similar, with very nearly identical proportion of native whites, Mexicans as the major group of nonwhites, and a variety of individual representatives of Europeans. A group of Filipino workers formerly lived in Arvin but are now gone; a number of Japanese families have been evacuated from Dinuba. Most of the Mexicans in both communities, and all of the Arvin Negroes are agricultural laborers.

SIZE OF FAMILIES

A striking difference between Arvin and Dinuba is the large difference in the size of families. In Arvin the average household contains 4.2 persons while in Dinuba it has only 3.4 persons.[8] Two important facts are responsible for this: in Dinuba there are many more elderly and retired couples and families from which grown children have separated, and in Arvin there are more farm laborers from the southwest with characteristically large families. Table 17 shows the size of families by major occupational groupings. Each category in Arvin is larger than the comparable occupation category in Dinuba, but in no case is the difference so great as the difference in the total. Farm laborers in both communities have the largest families, and the preponderance of this category in Arvin, to a very large extent, accounts for the difference between the family size in the two towns.

The distributions of families by size categories shows the high proportion of one- and two-person families in Dinuba and the proportionately fewer large families (table 18).

TABLE 17.—*Average size of household by major occupation groups: Arvin and Dinuba*

Occupation category	Number of persons in household	
	Arvin	Dinuba
Farm operator	3.67	3.2
Business, professional and white collar worker	3.30	3.2
Farm labor	4.75	4.2
Other labor	2.90	2.4
Nonemployed	2.62	2.1
All groups	4.20	3.4

Source: Schedule data.

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[8] The family for purposes of this study includes all members of the household at the time of intervie whether related or not. There were very few roomers, boarders, or hired men. Separate establishme (such as labor homes or multiple apartments) were counted individually. It is interesting to note that the town of Dinuba the average family was 3.32, which corresponds closely to the figure 3.37 given for Dinu in the 1940 census. This is the only figure group for which comparable data are available.

TABLE 18.—*Distribution of families by size of households: Arvin and Dinuba*

Size category	Arvin	Dinuba
	Percent	*Percent*
1 person	4	9
2 persons	15	30
3 to 5 persons	55	48
6 persons or over	26	13
Total	100	100

Source: Schedule data.

Population statistics in wartime are subject to error because of the numbers in the armed forces. Twenty percent of the Dinuba families had sons, daughters, or husbands in the services against but 10 percent in Arvin. Dinuba families have contributed about 590 persons to the armed services as compared with but 280 persons from Arvin, or about 1 person per 5 families in Arvin against nearly 1 in 3 in Dinuba. Farmers in both communities have contributed heavily to the services, 29 percent of them in Arvin having members in the service as against 25 percent in Dinuba. Only 9 percent of Arvin labor families have boys or girls in the services, and only 10 percent of the Arvin white-collar families are represented there. In Dinuba 15 percent of the laborers have family members in the Army or Navy, while all other groups run between 20 and 25 percent.

Any immediate family member (son, daughter, or spouse) regardless of age or marital status, who was outside the household was enumerated, but not included in the population estimates. In Arvin 16 percent of the families (about 25 percent of all labor families) had persons living away from home. In Dinuba this proportion is greater, with 36 percent of the families reporting members outside the household. Dinuba families had sons, daughters, or husbands away from home, either in the services or living outside the home in 41 percent of the cases. In Arvin these were only reported in 24 percent of all families. These absent family members somewhat correct the impression made by the small size of Dinuba families and account for much of the difference in family size between the two.

The data on family size in these two communities have some interesting general connotations. It is generally the case nationally that the farm families are large and town families small. This is not the case in either of these two communities, where the farm families are smaller than the community average and comparable to the business, professional, and white-collar workers. It is the farm laborers who have the large families. This close similarity in size of family between the farm operators and the business groups and the divergence in size of family between these groups and the laboring class offers a pattern which is displayed repeatedly and presents an index to the urbanization of the farm population.

AGE DISTRIBUTION

The median age of Arvin residents is 20 years; of Dinuba is 27 years. Figure 7 shows an age-distribution pyramid of all members in the households interviewed, undifferentiated by sex for Arvin and

Dinuba, and for the total population of the eight counties of the San Joaquin Valley in 1940. The greater number of old people in the Dinuba population and the relatively few in their early productive years show clearly in this chart. In both communities the draft and urban-work opportunities have reduced the number of people between ages of 15 and 30. Both pyramids show the effects of increased birth rate of the past few years. Arvin has a strikingly large number of adults in the thirties, and thus has many more children under 15 than Dinuba. Dinuba's population in all respects shows closer similarity to the total San Joaquin age distribution. It may be described as normal, mature, or stable in comparison with Arvin's. Each community has just half of its total population in the productive ages 20 to 64.

These differences are largely attributable to the age of the two communities, for Arvin displays the age distribution of a new town with a large number of young adults and their children and very few persons in the old-age categories.

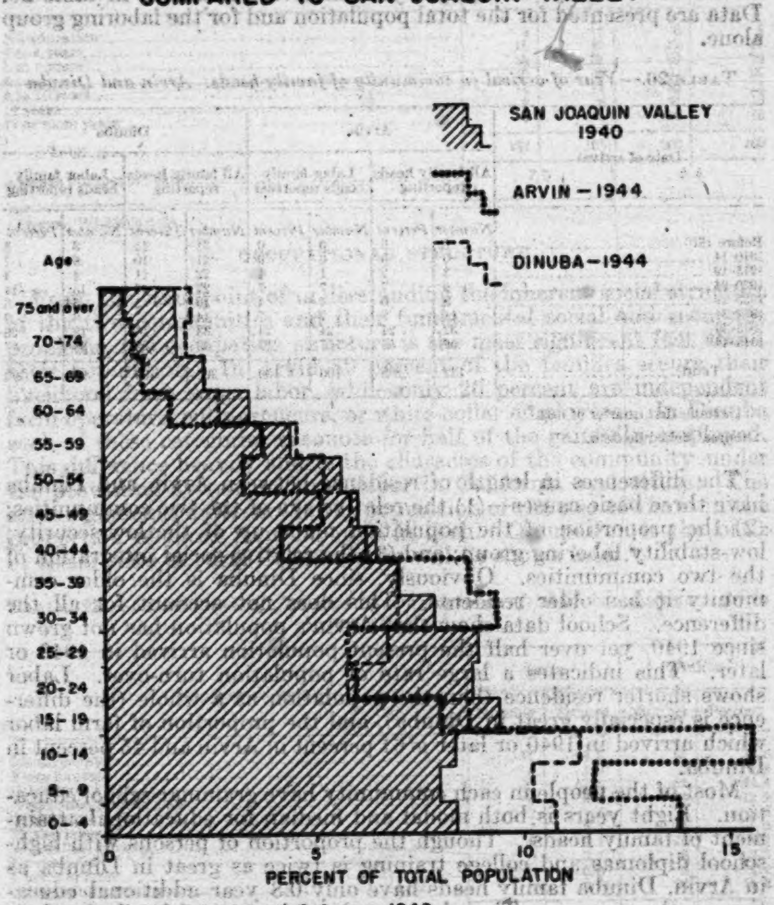
SOCIAL BACKGROUND

Only a small proportion of the people are native Californians. In Arvin about 4 percent of family heads and in Dinuba about 19 percent were born in California. The Arvin population originated predominantly in the States of Oklahoma, Texas, and Arkansas, for 63 percent of the family heads were born in these States. Twelve percent of the family heads were foreign born, most of these in Mexico. Though the California-born family heads were far more numerous in Dinuba, they are still a minority. Oklahoma, Texas, Missouri, and Kansas were the birthplaces of just one-third of the total, while another 19 percent were born outside the United States. These data, based upon the schedules, are presented in table 19.

TABLE 19.—*Birthplace of family heads: Arvin and Dinuba*

Place of birth	Family heads			
	Arvin		Dinuba	
	Number reported	Percent	Number reported	Percent
All American-born	117	88	166	81
California	5	4	40	19
Oklahoma	41	32	23	11
Texas	22	16	15	8
Arkansas	21	15	6	3
Missouri	4	3	16	8
Kansas	4	3	14	7
Kentucky	2	2	7	3
All others	18	13	45	22
All foreign-born	15	12	40	19
Mexico	9	6	7	3
Canada	3	2	8	4
Armenia	0	0	7	3
Russia	0	0	6	3
All others	3	3	12	6
Total	132	100	206	100

Source: Schedule data.



AGE DISTRIBUTION OF ARVIN & DINUBA POPULATION COMPARED TO SAN JOAQUIN VALLEY

Source: Schedule data, U.S. Census, 1940

FIGURE No. 7

Both communities have a relatively large number of newcomers, but this group is far more numerous in Arvin than in Dinuba. Over half the Arvin residents came there in 1940 or later, while only about a fourth came to Dinuba during the same period. The longest residents in the Arvin sample came to the community in 1919, while a few Dinubans had been resident since before the turn of the century. The year of arrival of family heads, by 5-year intervals, is shown in table 20. Data are presented for the total population and for the laboring group alone.

TABLE 20.—*Year of arrival in community of family heads: Arvin and Dinuba*

Date of arrival	Arvin				Dinuba			
	All family heads reporting		Labor family heads reporting		All family heads reporting		Labor family heads reporting	
	Number	*Percent*	*Number*	*Percent*	*Number*	*Percent*	*Number*	*Percent*
Before 1910	0	0	0	0	31	15	3	3
1910–14	0	0	0	0	21	10	6	7
1915–19	3	2	1	1	22	11	4	4
1920–24	9	7	7	7	27	13	13	14
1925–29	8	6	4	4	10	5	5	6
1930–34	11	8	7	7	14	7	8	9
1935–39	32	24	24	24	33	16	18	20
1940–44 [1]	69	53	57	57	48	23	33	37
Total	132	100	100	100	206	100	90	100

[1] Includes first quarter of 1944.

Source: Schedule data.

The differences in length of residence between Arvin and Dinuba have three basic causes—(1) the relative age of the two communities; (2) the proportion of the population made up of the low-security; low-stability laboring group; and (3) the relative social integration of the two communities. Obviously, since Dinuba is the older community it has older residents. This does not account for all the difference. School data show that Arvin's population has not grown since 1940, yet over half the present population arrived in 1940 or later. This indicates a large rate of population turn-over. Labor shows shorter residence than the population as a whole (the difference is especially great in Dinuba), and the proportion of farm labor which arrived in 1940 or later is 61 percent in Arvin and 45 percent in Dinuba.

Most of the people in each community have grammar-school education. Eight years is both modal and median for educational attainment of family heads. Though the proportion of persons with high-school diplomas and college training is twice as great in Dinuba as in Arvin, Dinuba family heads have only 0.8 year additional education on the average. The educational attainment of family heads is presented in table 21.

TABLE 21.—*Levels of education of family heads: Arvin and Dinuba*

Educational attainment	Arvin		Dinuba	
	Family heads reporting		Family heads reporting	
	Number	Percent	Number	Percent
No education	3	3	8	4
1 to 4 years	15	12	19	10
5 to 7 years	38	31	40	20
8 years	40	32	52	25
9 to 11 years	14	11	30	15
12 years	8	6	31	15
13 or more years	8	6	19	10
Total	126	100	200	100
Average number of years	7.6		8.4	

Source: Schedule data.

OCCUPATIONAL STRUCTURE

From the standpoint of understanding the inherent social structure of the two communities and their fundamental social and economic problems, the occupation structure is the most significant fact about their population. In Arvin 80 percent of the families secure their livelihood from wage labor, while only 20 percent are independent farm operators, entrepreneurs, or white-collar employees. In Dinuba each of these categories accounts for half of the gainfully employed. This difference heavily affects the character of the community under the prevailing system of hired labor in California agriculture. The most significant difference in the population of the two towns is in the proportion of hired farm laborers in each. Occupation is the basis of social class in rural California, as will be shown later.[9]

TABLE 22.—*Distribution of families by employment of chief breadwinner, Arvin and Dinuba* [1]

Occupation category	Arvin		Dinuba	
	Number	Percent	Number	Percent
Farm operator	14	10.6	65	30.6
Farm foreman	4	3.0	3	1.4
Other farm labor	76	57.6	52	24.4
Merchants, professionals	8	6.1	26	12.2
Other white collar	2	1.5	6	2.8
Skilled labor	7	5.3	15	7.0
Semiskilled labor	8	6.1	10	4.7
Service labor	5	3.7	6	2.8
Unskilled labor	0	0.0	6	2.8
Not gainfully employed [2]	8	6.01	24	11.3
Total	132	100.0	213	100.0

[1] Head of family, if fully employed; or if he has greatest amount of employment; otherwise, most important breadwinner in family.

[2] Not gainfully employed, includes all persons unemployed except seasonally unemployed persons, all retired persons, and families whose chief support comes from a person in the armed services.

Source: Schedule data.

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[9] See also Social Structure of a California Rural Community, by Walter R. Goldschmidt, Ph. D. thesis. University of California, Berkeley, 1942.

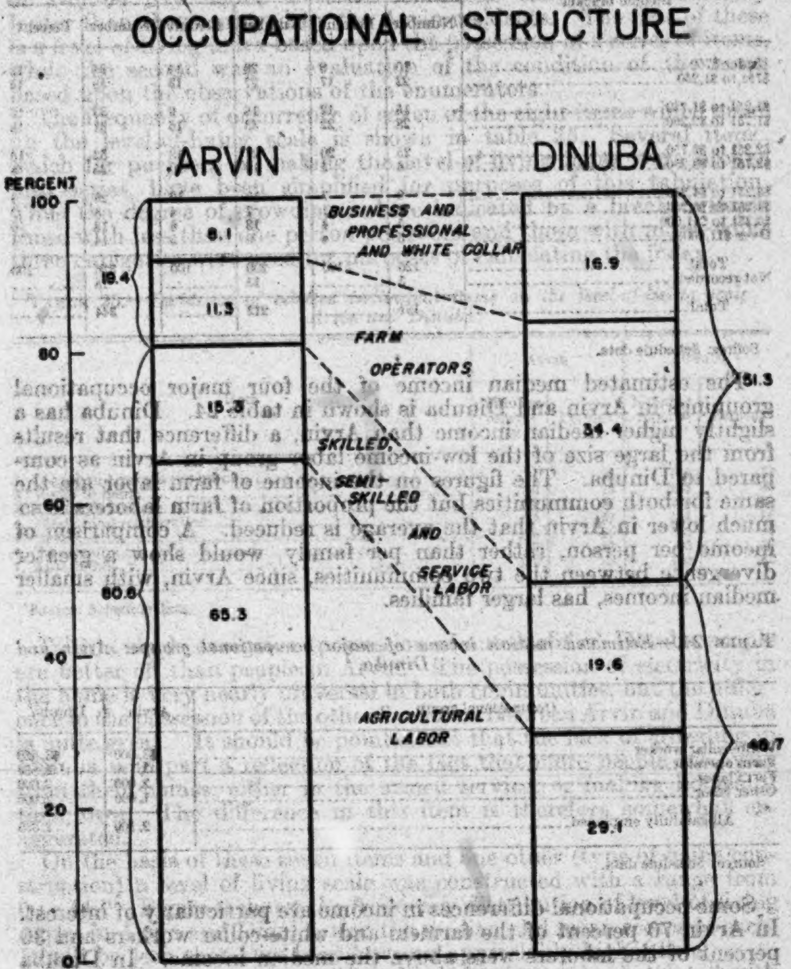
The occupations according to 10 major groups are shown in table 22. While this gives a clear picture of the major occupational categories, the individual cells are too small to permit of further statistical analysis. For that reason the following groupings have been made:

		Percent		Percent
1. Farm operator	Farm operator:		Farmer and white collar:	
	Arvin	11.3	Arvin	19.4
	Dinuba	34.4	Dinuba	51.3
2. Merchant and professional 3. Other white collar	White collar worker:			
	Arvin	8.1		
	Dinuba	16.9		
4. Skilled labor 5. Semiskilled labor 6. Service labor 7. Unskilled labor	Nonfarm labor:		Laborers:	
	Arvin	16.1	Arvin	80.6
	Dinuba	19.6	Dinuba	48.7
8. Farm foremen 9. Farm labor	Farm labor:			
	Arvin	64.5		
	Dinuba	29.1		
10. Nonemployed.				

Despite the great difference shown in these figures between the occupational structure of Arvin and Dinuba, these figures actually understate the proportion of farm laborers. Neither residents in the Government camp just outside the Arvin community boundary nor the residents on the DiGiorgio holdings were included. All of the former (about 200 families) and nearly all of the latter (about 150 families) are farm laborers. Though the Government camp is outside the community, many of the residents work within the Arvin area. The DiGiorgio camps are within the community boundaries. Nevertheless, accepting these figures at face value, we find a striking difference between the two communities.

INCOME

Estimates of the distribution of income in the two communities can be had by means of data obtained from the schedule. Each person interviewed indicated the income bracket in which he fell during the calendar year of 1943. The information was probably fairly accurate since it was obtained shortly after respondents had filed income tax returns. Because the upper bracket was open, it is impossible to determine average income, so median figures must suffice. Wartime farm prices and farm wage rates have undoubtedly had a great effect both on the absolute values and on the distribution of incomes so that they cannot be considered normal. This is an error which must be recognized, though there is no adequate means of correcting it. Table 23 shows the income distribution by brackets for both communities. Groupings are made which divide the sample into four approximately equal parts. It will be seen that Dinuba has a larger group in the lowest quartile, but that Arvin has more incomes falling below the median.



SOURCE: COMPARATIVE COMMUNITY STUDY SCHEDULES

FIGURE No. 8

TABLE 23.—*Income distribution in Arvin and Dinuba*

Income bracket	Arvin		Dinuba		Total	
	Number	Percent	Number	Percent	Number	Percent
Under $750	10	8	28	14	38	12
$751 to $1,250	22	17	27	13	49	15
$1,251 to $1,750	15	12	18	9	33	10
$1,751 to $2,250	28	22	33	16	61	18
$2,251 to $2,750	25	20	27	13	52	16
$2,751 to $3,250	6	5	19	10	25	8
$3,251 to $4,250	9	7	19	10	28	9
$4,251 to $5,250	1	1	7	4	8	2
$5,251 to $11,000	5	4	13	6	18	6
Over $11,000	5	4	9	5	14	4
Total	126	100	200	100	326	100
Not recorded	5		13		18	
Total	131		213		344	

Source: Schedule data.

The estimated median income of the four major occupational groupings in Arvin and Dinuba is shown in table 24. Dinuba has a slightly higher median income than Arvin, a difference that results from the large size of the low-income labor group in Arvin as compared to Dinuba. The figures on the income of farm labor are the same for both communities but the proportion of farm laborers is so much lower in Arvin that the average is reduced. A comparison of income per person, rather than per family, would show a greater divergence between the two communities, since Arvin, with smaller median incomes, has larger families.

TABLE 24.—*Estimated median income of major occupational groups: Arvin and Dinuba*

Occupational group	Arvin	Dinuba
White-collar worker	$3,000	$2,650
Farm operator	3,750	2,850
Farm labor	2,000	2,000
Other labor	1,600	2,000
All gainfully employed	2,100	2,350

Source: Schedule data.

Some occupational differences in income are particularly of interest. In Arvin 70 percent of the farmers and white-collar workers and 36 percent of the laborers were above the median income. In Dinuba the proportions are 65 and 40 respectively.[10] The difference in the position of the farm operator in the two communities is also significant. In Arvin the farmer has a higher median income than the white-collar worker while in Dinuba the reverse is true. This difference is clearly reflected in the social position of these two groups, as will be shown later.

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[10] The association between social phenomena analyzed and the differences between the two communities were computed by a variety of techniques. Computations of chi square and *T* were considered most accurate and a table of results is presented in Appendix F. Chi square shows the probability of any difference being the result of chance, and *T* is a measure of degree of association roughly corresponding to the correlation coefficient. The variation in income was determined to be significant and the degree of relationship between occupation and income in the two communities is about the same magnitude.

LIVING CONDITIONS

Two measurements were obtained which indicate that the people of Dinuba live under material conditions that are measureably better than those enjoyed by the Arvin residents. The first of these is a level-of-living index based upon the possession of a series of items, while the second was an evaluation of the condition of the home based upon the observations of the enumerators.

The frequency of occurrence of seven of the eight items which make up the level-of-living scale is shown in table 25. Several items, which for purposes of making the level-of-living index were broken into series, have been simplified for purposes of this tabulation. Thus the degree of crowding is here indicated by a break between those with less than one person per room and those with more, while three categories were used for purposes of calculating the index.

TABLE 25.—*Incidence of selected individual items on the level-of-living scale: Arvin and Dinuba*

Item	Arvin		Dinuba	
	Number reporting	Percent	Number reporting	Percent
1. Less than 1 person per room	28	23	149	72
2. Water in home	90	75	185	90
3. Electric lighting in home	128	97	203	98
4. Mechanical refrigeration	75	57	154	75
5. Radio	113	86	190	92
6. Telephone	17	13	80	39
7. Automobile	109	83	170	82

Source: Schedule data.

With a single exception (possession of automobiles) Dinuba people are better off than people in Arvin. The possession of electricity in the home is very nearly universal in both communities, but the difference in the possession of the other five items between Arvin and Dinuba is quite great. It should be pointed out that the lack of crowding in Dinuba is in part a reflection of the fact that more people are away from their homes, either in the armed service, or making homes of their own. The difference in this item is therefore somewhat exaggerated.

On the basis of these seven items and one other (type of home construction) a level of living scale was constructed with a range from 0 to 44.[11] Figure 9 shows the frequency distribution of level-of-living scores in Arvin and Dinuba, and the median and mean scores of each. It will be seen that Dinubans have an appreciably higher level.

Level of living as measured by this index is clearly associated with occupation. Only 21 percent of Arvin laborers have an index above the median point of the combined sample, while 70 percent of the independently employed farmers and white-collar workers are in this category. In Dinuba 43 percent of the laborers are above the median, and nearly 90 percent of the independently employed fall in the upper brackets. (The median point was calculated for the combined sample.) That a statistically significant association between occupation and living conditions exists was indicated by the Chi Square Test.[12]

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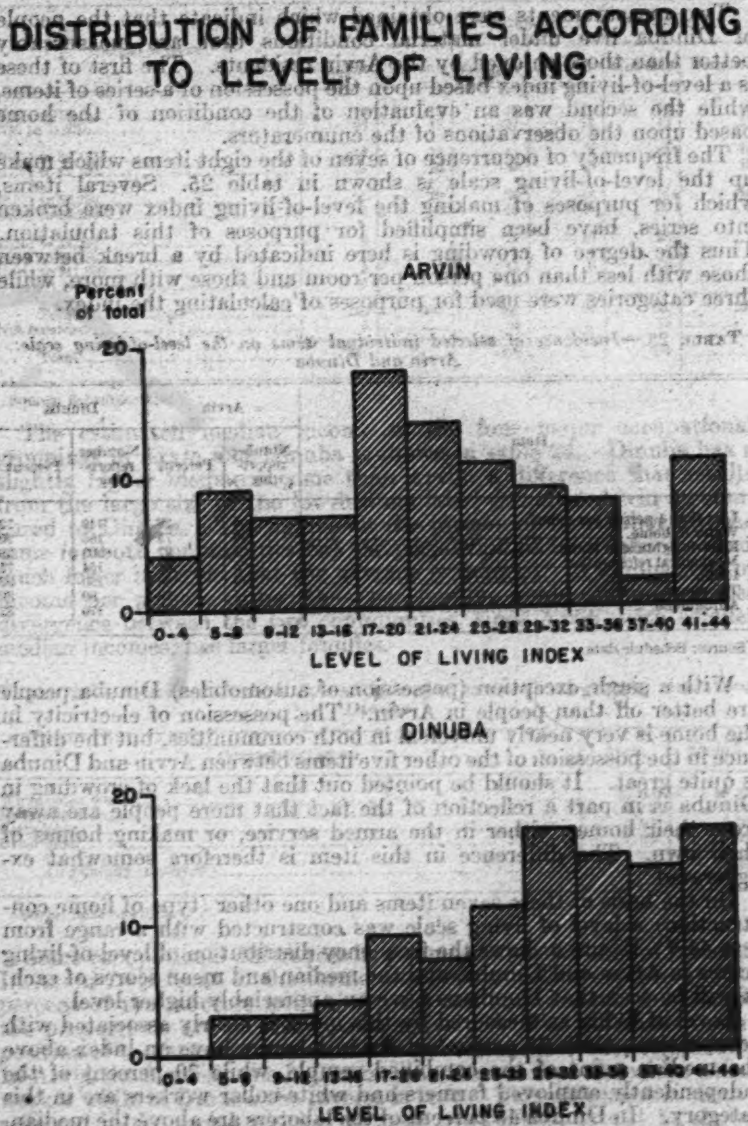
[11] The method of calculating this index is presented in appendix E.

[12] See appendix F.



DISTRIBUTION OF FAMILIES ACCORDING TO LEVEL OF LIVING

FIGURE No. 9

There is a similar association between level of living and income. The relation between these two factors is shown in the accompanying scattergram (fig. 10). It is readily seen that the upper income brackets regularly have a high level of living, but the lower brackets frequently have a high level of living, too. This is the result of two things; first, the fact that the income in any single year is not the determining factor for the attainment of a relatively high level of living, and second, that the items in the index were too basic and too nearly universal, and were too few in number to form a sufficiently sensitive reflection of living conditions or social position.

A second measure of living conditions was a more subjective evaluation of the premises and of the interior and exterior of the home made by the enumerator. This is a rough measure of the personal standards of cleanliness and orderliness within the financial ability of the individual family. No doubt the standards were affected by cash outlay, but a family placing a high premium on these values, and who correspondingly maintained a neat and orderly home and garden would be rated good even though the income was quite limited. A scoring system from 0 to 9 was developed, by giving the best and poorest values for each of the three enumerated items the value of 3 and 0, respectively, and intermediate items values between. Figure 11 shows the cumulative percents at each score for Arvin and Dinuba, first for each community and second for the fundamental occupational dichotomy within each. Dinuba's score is superior, and the condition of laborers' homes is somewhat better there than in Arvin, yet basically the difference lies between the laborer on one hand and the farmer and white-collar worker on the other.

The occupational differences in the condition of the home which were found are statistically significant, according to the Chi Square Test.[18] In Arvin, 32 percent of the laborers and 67 percent of the farmers and white-collar workers fall above the median point with respect to this evaluation of the home. Corresponding proportions in Dinuba were 40 percent and 65 percent. The table in appendix F indicates that the association appears to be somewhat less close in Dinuba than in Arvin. Furthermore, home conditions being less dependent on economic status, they show a lower degree of association with occupation than does the index of level of living as measured by material possessions. The association between living conditions and income is slightly closer than between living conditions and occupation in Arvin; is somewhat less close in Dinuba.

These calculations show several things: (1) that Arvin conditions are consistently poorer than Dinuba ones, (2) that there is a significant association between occupation and conditions of living, (3) that these conditions as measured by income, level of living, and conditions of the home are all closely interrelated, and (4) that the poorer conditions in Arvin are therefore a direct function of the great preponderance of the farm labor group in that community.

PATTERN OF SETTLEMENT

Some appreciation of the nature of the two communities can be had by the examination of maps showing the location of business districts, residences, churches, and public buildings. Such maps are reproduced

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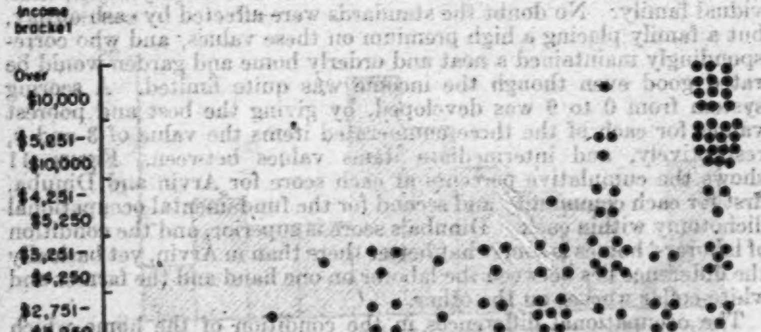
[18] See appendix F.

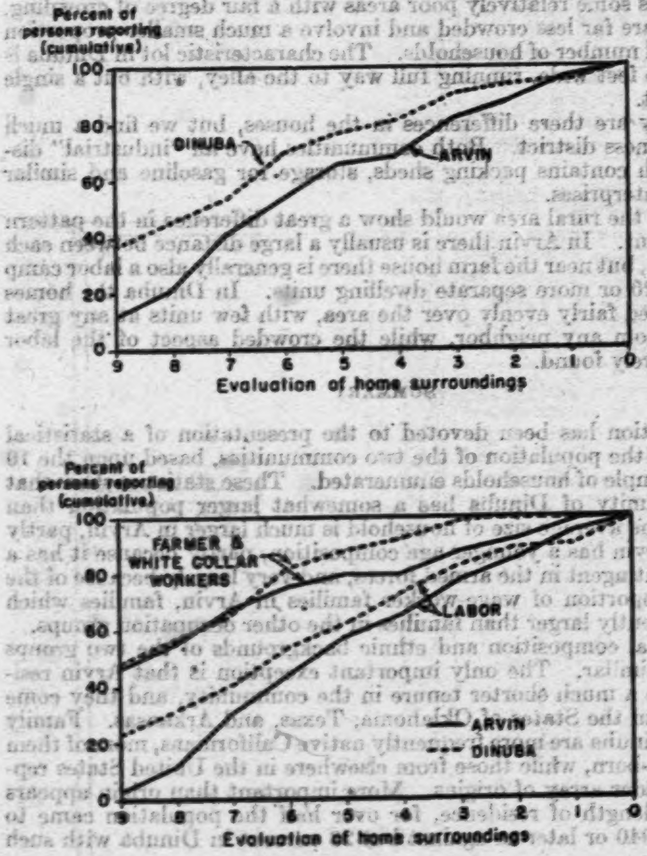
SCATTERGRAM SHOWING RELATIONSHIP BETWEEN LEVEL OF LIVING AND INCOME



Source: Schedule data

FIGURE No. 10

DISTRIBUTION OF INDEX OF HOME CONDITIONS
showing occupational differences
ARVIN & DINUBA



Source: Schedule data

FIGURE No. 11

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on figures 12 and 13, which are on the same scale to allow for ready comparison. The rectangles representing individual residences are of such a size that they represent the minimum adequate floor space considered necessary for a family of four or five persons.

The relative crowding of the houses is immediately apparent. Few areas in Arvin have 50-foot lots and most of them do not have full depth. Throughout certain districts it has been the practice to place two units on a single lot, one facing the alley and the other the street. Dinuba has some relatively poor areas with a fair degree of crowding, but these are far less crowded and involve a much smaller proportion of the total number of households. The characteristic lot in Dinuba is 50 or more feet wide, running full way to the alley, with but a single family unit.

Not only are there differences in the houses, but we find a much larger business district. Both communities have an "industrial" district, which contains packing sheds, storage for gasoline and similar types of enterprises.

Maps of the rural area would show a great difference in the pattern of settlement. In Arvin there is usually a large distance between each farm house, but near the farm house there is generally also a labor camp with 4 to 20 or more separate dwelling units. In Dinuba the homes are scattered fairly evenly over the area, with few units at any great distance from any neighbor, while the crowded aspect of the labor camp is rarely found.

SUMMARY

This section has been devoted to the presentation of a statistical analysis of the population of the two communities, based upon the 10 percent sample of households enumerated. These statistics show that the community of Dinuba has a somewhat larger population than Arvin. The average size of household is much larger in Arvin, partly because Arvin has a younger age composition, partly because it has a smaller contingent in the armed forces, and very largely because of the greater proportion of wage-worker families in Arvin, families which are consistently larger than families in the other occupation groups.

The racial composition and ethnic backgrounds of the two groups are quite similar. The only important exception is that Arvin residents have a much shorter tenure in the community, and they come largely from the States of Oklahoma, Texas, and Arkansas. Family heads in Dinuba are more frequently native Californians, more of them are foreign-born, while those from elsewhere in the United States represent a wider array of origins. More important than origin appears to be the length of residence, for over half the population came to Arvin in 1940 or later as against but 23 percent in Dinuba with such brief tenure.

Almost every family head in each community had some education, and most had completed elementary school. Dinubans more frequently had college training, but there was less than a year's difference in average number of years of school completed between the family heads in Arvin and those of Dinuba.

The most significant population differential between the two communities is the occupation of the family heads. Eighty percent of the Arvin population works for wages, while in Dinuba this group

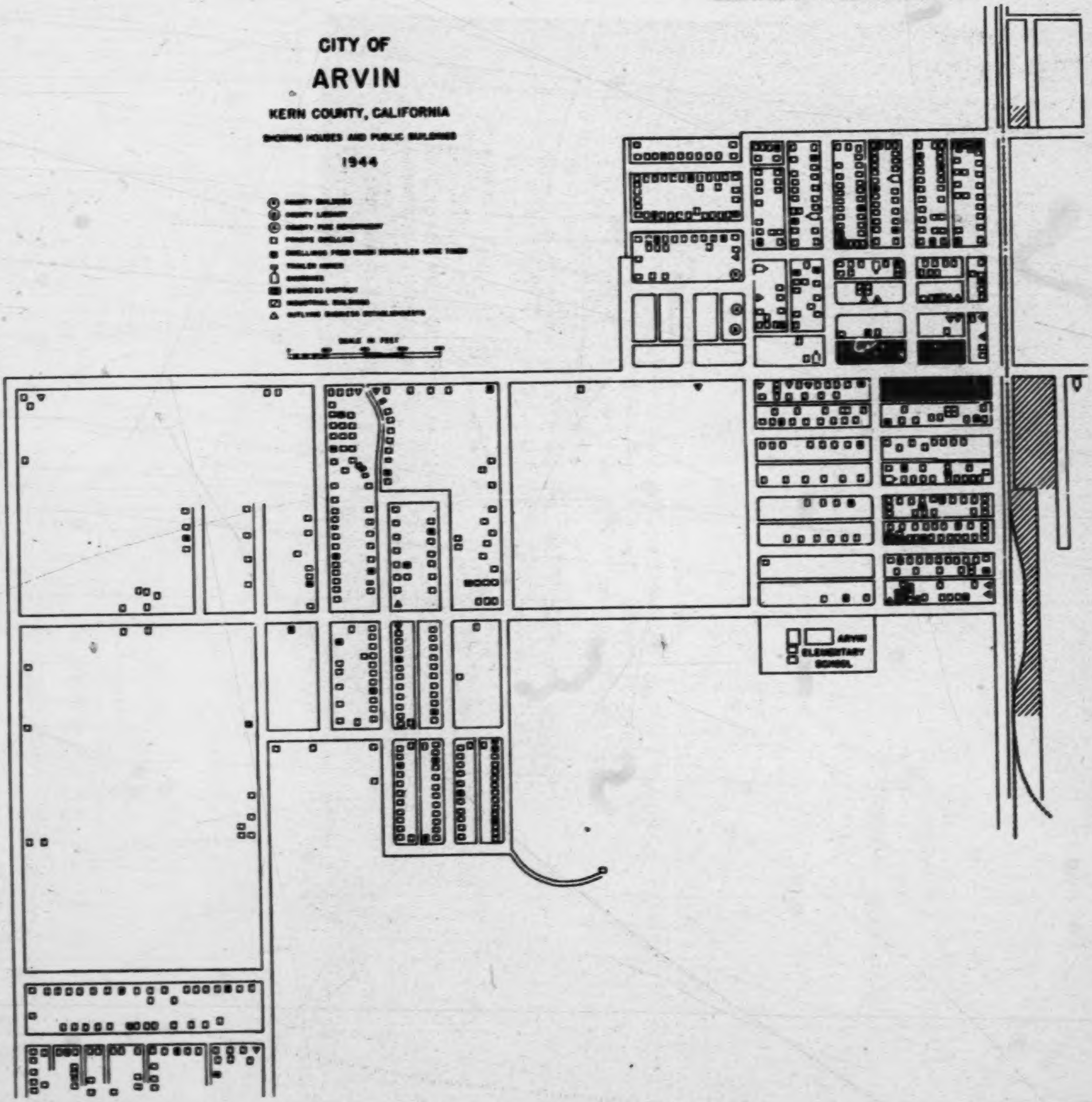
CITY OF

ARVIN

KERN COUNTY, CALIFORNIA

SHOWING HOUSES AND PUBLIC BUILDINGS

1944



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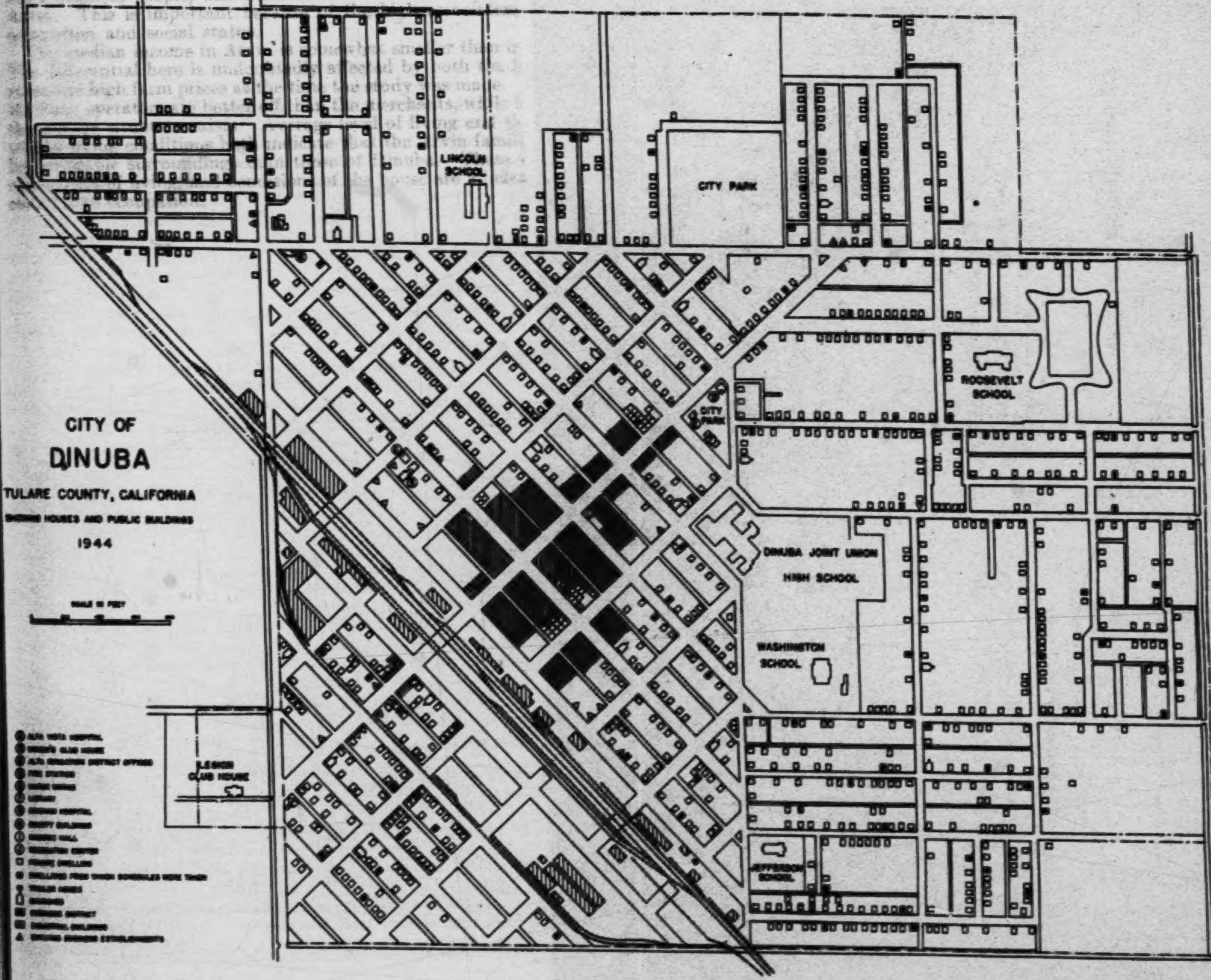
CITY OF
DINUBA
TULARE COUNTY, CALIFORNIA
SHOWING HOUSES AND PUBLIC BUILDINGS
1944
SCALE IN FEET
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CITY PARK
ROOSEVELT SCHOOL
CITY PARK
DINUBA JOINT UNION HIGH SCHOOL
WASHINGTON SCHOOL
JEFFERSON SCHOOL
LEGION CLUB HOUSE
FIRE STATION
DWELLINGS FROM WHICH SCHEDULES WERE TAKEN
BUSINESS DISTRICT
OUTLYING BUSINESS ESTABLISHMENTS

63753 O - 46 (Face p. 53) No. 2

represents just half of all the families. There are far more farmers, more business people, and more skilled workers in Dinuba than in Arvin. This is important because of the high association between occupation and social status.

The median income in Arvin is somewhat smaller than in Dinuba. The differential here is undoubtedly affected by both the high wage rates and high farm prices at the time the study was made. In Arvin the farm operators are better off than the merchants, while in Dinuba the reverse situation exists. Average level of living and the evaluation of living conditions both indicate that the Arvin families live in less desirable surroundings than those of Dinuba. These items, income, level of living, and conditions of the house are all clearly associated with occupation.

CHAPTER V

SOCIAL ASPECTS OF COMMUNITY LIFE

The differences between Arvin and Dinuba strike the casual
server immediately, for their appearance is demonstrative of diverg
social characteristics. Driving into Dinuba from any direction
approaches the business section of the town by going through t
lined streets flanked by rows of substantial dwellings. The busin
section of town is made up of brick buildings, many two stories hi
and gives the appearance of stability and prosperity. The stre
are wide and well paved, both in the business and residential
tions. Approaching Arvin from either direction, one moves from
open country immediately into the small business section. The m
street is lined with low stucco buildings and service stations fo
distance of about two blocks. The side streets are entirely unpav
there are no sidewalks, and the houses are crowded so close toget
that in some sections of town half of them front on the alleys.
single street for a distance of about two blocks is lined with hou
where lawns have been planted (see figs. 12 and 13).

GOVERNMENT

Dinuba is an incorporated community and has a local governme
Arvin is governed by the county. Incorporation is a matter of lo
action, and affects the life of the community in many ways. Inc
poration and the quality of community government are import
to this analysis not only because they affect the lives of the citiz
but because they are indicative of the spirit and motivation of
community.

The fact that Arvin has never constituted itself a civic body
doubtedly finds its root cause in the lack of any real civic unity.
lack of unity, which in essence makes two communities out of Ar
(one of farmers and one of laborers) will be analyzed later. So
Arvin residents find the reason for failure to incorporate in this
alone, such as a minister who said that property owners do not w
incorporation because they fear that the laborers would then "
the town." This is certainly not the only cause.

It should be pointed out that many California towns remain u
corporated, and this is particularly true of the towns in Kern Cou
Kern is a wealthy county and it has a strong and effective cou
government capable of furnishing services to the local communit
Each town has a fire department with adequate and modern equ
ment; each of the townships has a deputy sheriff, who is also
quately equipped. The county has a planning board which is at
service of local groups in unincorporated communities. For insta
Arvin has been furnished with modern stucco buildings (an attrac
type of architecture admirably adapted to the desert climate) fo

fire department, for local offices of the sheriff, the welfare department, the health department, and the agricultural representative, and a community hall and kitchen. Such county-furnished facilities are as elaborate as the local electorate could furnish for itself, and reduce the incentive to incorporate.

Incorporation has advantages and disadvantages. It is argued that the large corporations and absentee landholders do not favor it because their taxes are increased while they receive little or no direct benefit, that local merchants and professional people usually are in favor of having city government because they get needed services—such as a local police force—which save them money. It also is said to "promote" the community, thereby increasing the value of their business. Other citizens probably weigh these benefits against the cost with varying results. Social considerations favor incorporation, provided the city government does not become corrupt. This is because an incorporated city can perform needed services to local people over which they have direct control, and because it encourages a spirit of community solidarity which will otherwise have no means of developing. These generalizations are substantiated by the situation in Arvin and Dinuba.

Though the county has furnished some things to Arvin, it has not provided it with others. Not until 1940 was there a sewage-disposal plant. Water and garbage service is provided by private enterprisers, with no direct popular control over their activities. Certain congested areas in Arvin are only now getting an adequate water supply from a central system. Street paving, the building of sidewalks, street lighting, parks, and such matters are supplied by the county.

Decisions as to the expenditure of money for such civic improvements and the general welfare are remote from the people who are to be affected by them. One important county official addressed the Booster Club of Arvin somewhat as follows: "You will have to let me know about your community problems, for you know more about the needs of your town than I do. I don't know what you need. You have to let me know how you want the law administered, because I don't want to run your labor off to some other town." This club is composed largely of farm operators. This is not an isolated case. When the community wants a park, a school, or lights, it must form a committee to wait on the county officials, or the county commissioners ask the leading clubs what their pleasure is with respect to certain decisions. In thus arriving at decisions, only a small segment of the community is formally consulted. However just and equitable the decisions are, they are participated in by only a small section of the community.

Without a civic entity, and with limited participation in community decisions, there is a serious lack of spirit and solidarity. Lack of unity even among the merchants along the main street was so great that one of them described it as follows:

> Prior to 2 years ago, when some Bakersfield men organized a chapter of the Lions Club, the merchants didn't even know each other. At the first meeting we had a sort of contest to see who could call each other by their first name, and found that none of us knew many of them. We worked here during the day and went home at night and never gave a thought about the other man on the street. * * *
>
> I am rarely on the other side of the street, and still know only one of the merchants over there.

Dinuba's incorporation dates from 1906, and city government is a very real part of Dinuba life. A council of five is elected for a 4-year term, three at one time and two at another. A heated biennial election had been held just prior to the time of field investigations for the present study, and the issues were still fresh in the minds of civic leaders, issues involving local problems which the local electorate decided at the polls.

In the course of its history, the city has paved many miles of streets and laid many miles of sidewalks. It has established a water system, a sewerage system, and a garbage-disposal system; it has placed electric lights along its streets throughout town, has created two parks and is creating a third one, and maintains police and fire departments. The council selects a chairman who is the mayor, and each councilman is in charge of one of five departments. These are (1) police and fire, (2) streets, sewers, and water, (3) parks and waste disposal, (4) city properties, and (5) finance. The operation of the city government is therefore close to the people.

In final analysis, the worth of this must be measured in accomplishment. The police force of four maintains order in the community. Court actions are confined largely to "driving while intoxicated" charges. Houses of prostitution in the community were readily eliminated at the specific request of the War Department.

The fire department is efficient. Its rapid response to a fire and its consideration of property owners, as well as its interest in fire prevention, was observed. The department is jointly operated with the county. There are four paid firemen who operate the county engines outside the city limit and both county and city engines within the city. In addition, there is a volunteer group which serves both town and county. These men serve at nominal pay, and have, after a pattern frequently found in rural California, made a social organization out of the department.

The present mayor claims responsibility for establishing the city garbage system. Four years ago garbage collection was a private franchise. It was expensive and few people availed themselves of the service. It is now a city service, paid for out of an addition of 50 cents to the monthly water charge. After many years of inadequate service, the alleys had become very dirty and the mayor hired a crew to clean them up. Adequate garbage service has made it possible to keep the alleys clean. The mayor was particularly proud that no WPA help was required on this project, and that the service is done at so small a charge without resorting to feeding garbage to hogs. He avoided this because of the nuisance to householders of segregating garbage, and because he anticipates that this practice will eventually be outlawed.

Most of the streets are paved and lighted with electroliers. They are kept unusually clean, and together with the planting of trees make the Dinuba residential areas attractive. The paving and lighting, along with the sewage system, was established in the postwar boom period at excessive costs. At that time Dinuba was confidently expected to expand into a community of much larger size, and this expectation and high raisin prices conspired to create a spirit of overoptimism. The result was overexpansion, with the inevitable collapse that caused heartaches in the community. Assessments ran high, the town was overbuilt, houses and other property were lost, and the community came to the verge of bankruptcy. Prevalent local opinion does not blame this on corruption within the community, but rather on a combination of overoptimism and sharp sales practices during the inflation period after the last war.

A process of refinancing has been carried on during the past 7 years. The result is that the town is virtually debt-free. The largest block of bondholders agreed to accept 60 cents on the dollar for outstanding debts, which are now fully paid. Other bonds are still outstanding, but the city is trying to buy them up as fast as possible. The city took over property for taxes, and has sold most of it, so that it has money to buy bonds, but the holders are now unwilling to part with them, as there is a good rate of interest on these investments.

The two parks are exceptionally well kept. One is near the center of town, the other larger one at the outskirts. It has playground and picnic facilities. The schools furnish additional playgrounds and playing fields. The city has planted trees in a third park, but will not plant shrubs and lawn until the trees are sufficiently mature.

A chamber of commerce sponsored dinner on postwar planning, which took place the first evening of field study in the community, demonstrated the type of civic cooperation, the quality of leadership, the nature of local friction and rivalry, and the spirit of loyalty among community leaders. It was held at one of the churches; the ladies' aid prepared and served the dinner as a means of increasing their funds. The dinner was sponsored by two business organizations cooperatively, and about 150 persons participated in the event. More than a dozen civic leaders spoke on topics ranging from industrial activities and city finances to the development of a youth center and the planting of victory gardens. The ultimate purpose was to develop interest in postwar planning for the community. The dinner followed close upon the heated city elections, and the traces of ill-feeling remained, though officially denied.

This privately sponsored meeting was not attended by representatives of farm laborers or other laboring groups. Since it was an open meeting, they could have participated if they were sufficiently motivated, though with the same psychological and social barriers that would keep them out of such a meeting in Arvin. The absence of laborers is not felt so keenly since they form a smaller portion of the population than in Arvin. However, the principle remains.

SCHOOLS

The first school in the Dinuba area started in 1879 with 13 pupils, the second in 1884 with 20. In 1889 an elementary school was opened in Dinuba proper with an average daily attendance of 48. In 1944, the Dinuba Elementary School, housed in four separate units scattered through town, has an average daily attendance of 605, but at one time had as many as 940. In the rural area there are four schools, and a portion of another from which the children come to the Dinuba High School. These rural schools have an average daily attendance of 350, but at one time had 450. The highest combined average daily attendance was in 1922–23, when the figure was 1,251. The boundaries of these school districts fit very closely the boundary of the community as delineated.

In the Arvin area two schools were opened in 1902–3, with a total average daily attendance of 29. A school was opened at Arvin in 1914–15. These three schools reached a combined average daily attendance of 1,242, and the Arvin school reached a peak of 683 in 1940–41 and is still close to that level. District boundaries conform poorly to the community boundary as delineated, with one of the three schools serving neighboring Weedpatch as well as many homes in the Arvin area. Strictly speaking, therefore, the school attendance never reached as high a figure in Arvin as it did in Dinuba. This is to be expected, for Arvin is presently smaller than Dinuba, and the Dinuba population is considerably less than its post-World War I peak. The close parallel in the growth of the two communities is shown in figure 20, which gives the growth curve of the elementary-school attendance for both towns on the same scale, but with Arvin dates set back 20 years. The similarity in growth pattern is striking.

If attention is given to the elementary school in the towns, rather than to all schools in the area, the same similarity in growth pattern is found. Again the growth curves are closely parallel, but Arvin is about 24 years later than Dinuba, rather than 20. Since this does not represent town residence, but merely the pupils from that geographic area which the town school serves, the comparison is of less value than the more inclusive one, and is indicated merely further to substantiate the general similarity in growth and the relative age of each community.

Both Arvin and Dinuba have modern school plants. The Arvin buildings are newer than the Dinuba ones, but are somewhat more crowded. Both conditions would be expected in view of the history of the two communities. Arvin has somewhat greater average daily attendance per teacher—30 as compared with 26. A very significant difference, however, lies in the nature of the planning. Dinuba has adopted an unusual plan of separating its school into four parts. Two units each serve the first four grades and the other two units serve grades 5 and 6 and grades 7 and 8. There are several advantages to this system. First, by placing the lowest grades at the opposite corners of town, the small children have relatively short distances to walk, second, the school playgrounds are scattered through town, and third, the age groups are separated. Undoubtedly the original cost as well as the upkeep is somewhat greater, with some disadvantages in the administration. For many reasons, this plan would not have the same advantageous effect in Arvin, where the district is large and the students are more widely scattered. Arvin has a system of bus transportation to bring the children the long distances to school.

The turn-over in teachers is an index to the school situation. In Dinuba 3 out of 22 teachers did not return for the 1943–44 session. In Arvin 14 of the 22 did not return. These figures apply only to the schools in the towns, but the other schools in the Arvin area had high turn-over rates—5 out of 8 and 4 out of 13. In the three schools combined, fewer than half the teachers had been there the preceding year. Such a high rate of turn-over indicates that the schools are viewed by teachers as a poor alternative and they tend to move away at their earliest opportunity. It means that the school cannot hold the best grade of teachers, and has fewer experienced ones. Rapid turn-over also means that the teacher does not become acquainted with the peculiar problems of the community and that the staff cannot develop the teamwork that is necessary.

From the community viewpoint, long teacher tenure means that the teacher plays an important role in the affairs of the community outside of the classroom. He serves not only as the vital leader of youth but in civic affairs in general. Dinuba has been particularly fortunate. The superintendent is recognized in all social gatherings as a leader; his advice is sought and his counsel followed. But he is not the only teacher who serves this vital function. For instance, one of the younger men on his staff—less than 10 years' tenure—already can boast of having been instrumental in starting a civic organization, and the youth service it performs, and has instigated other community improvements. The lack of this type of leadership is constantly made evident in Arvin. School and community functions suffer from an inadequate number of public-minded and trained citizens to supervise such affairs. The problem is aggravated by the fact that many of the teachers do not live in the community but commute from Bakersfield. These teachers naturally have less interest in the community, and most of them give no service to the community as a whole. This is particularly serious in a town which has few other sources of leadership.

The absence of a high school in Arvin is one of its most fundamental problems. It is recognized as such by Arvin people who have long sought a high school. In 1940–41 a study of the need was made,[14] and in October of 1941 a site was purchased just west of Arvin. Construction is planned for the postwar period. Whether it will be a full 4-year high school still remains in doubt. Arvin businessmen and resident farm operators are anxious to have the school built and presented a detailed statement of the advantages of an Arvin location over one in the Lamont-Weedpatch area. The report on site selection shows the average daily attendance for the four school districts which would be served by the proposed new high school and the high-school pupils resident in each. There were in January of 1941, when the data were assembled, 155 pupils in the Arvin school district and 271 in the 3 school districts which most nearly conform to Arvin boundaries. The plan includes a fourth district, which brings the high-school age population up to 390. These figures indicate a ratio of high-school pupils to elementary average daily attendance of 24 to 100. Using this ratio, the area would have had over 100 potential high-school pupils as early as 1925. This area centers at a distance of over 20 miles from the high school to which the pupils must ride.

The location of a high school is generally a matter of decision which goes beyond the local community, yet very properly the local population can influence a decision. The fact that Arvin does not have its own high-school facilities, though for nearly 20 years it has had an estimated high-school population of over 100, is evidence that insufficient influence and motivation could be mustered in the Arvin area.

The lack of high-school facilities is, in turn, a heavy detriment to the youth of the community. They must be on the bus as much as 2 hours a day, which gives them a very long school day and deprives them of hours when they could play, do chores, or earn spending money after school. According to local mothers, the rush, noise, and bustle of the bus ride is enervating. In the city school, the children find themselves among a large group of strangers. The requirement of catching the bus deprives them of time for extracurricular activities which would break down the barriers and otherwise give them satisfaction. These facts were set forth by an Arvin mother, who went on to say:

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[14] School Site Report, Arvin Lamont Area, manuscript report prepared by the site selection committee of the Kern County High School. By Norman Pellasby, T. L. McCain, and Thomas L. Nelson.

> The worst hardships of all are the discrimination that is made against local students (bus students) and their inability to participate fully in extracurricular activities because they have to go home by bus immediately after school is over. The school authorities try to put all the rural students into agriculture because they feel that they are all going to be farmers or laborers. They tried to put my sons into agriculture, and I went down not once, but twice, to have the schedule changed, because I want them to have a college preparatory course. The labor parents are not in a position to protest; if they do have the interest, they are licked by the fine surroundings and their own shyness.

The absence of a high school is a deprivation not only to the students but to the entire community. The high school in Dinuba is a rallying place for community action, a center of cultural activities such as lectures and musicals, and a source of leadership. In addition, it furnishes the town a playground, gymnasium, and auditorium. Arvin, lacking a high school, is also lacking in these.

SOCIAL INSTITUTIONS

Both communities have institutions which have grown up in response to local needs and the natural desire of persons to have social contacts. In Arvin there is relative poverty of such institutions, their functions are more limited, and fewer people have access to them. In Dinuba the more numerous organizations are active, and many people participate.

In Arvin there are the following formal organizations: The Booster Club, the Lions Club, the Farm Bureau center and Farm Home center, a chapter of the State Guard, and the Parent-Teacher's Association. In nearby Weedpatch, but with only a few Arvin participants, there is a Grange. This is a complete list of the formalized organizations by means of which Arvin residents get together for social functions or for any other kind of secular associated activities.

The Boosters is a local civic service club for men which meets once a month in the evenings. It was organized in 1921 as a civic improvement group and since that time has performed many useful community functions, largely as a group which induced the county to provide services. Among its first projects were obtaining a county road to the community and getting the area resurveyed. Its activities were largely responsible for getting a community hall, those street lights that are in Arvin, and the WPA-built sewage system. It has helped in two regular community events: The flower festival and the glider meet. The flower festival is a chamber of commerce activity which has publicized the famous Kern County wild flowers. In the spring the unplowed semidesert fields are transformed into a purple and gold carpet by the lupin and California poppies, and they attract thousands from Los Angeles and elsewhere. Some of the best fields are around Arvin, and the Boosters sponsored concessions and aided in the county-wide festival. The slopes east of Arvin have air currents favorable to gliding, and the Boosters aid a glider society in Los Angeles in staging a meeting once a year. These events have been curtailed by the war. Recently the group has directed its attention to alleviating local problems, such as petitioning Federal agencies for more wholesale gasoline. Aside from regular monthly dinner meetings, the club has occasional social functions.

Forty of the eighty-four members are farmers and thirty-nine are business, professional, or white-collar workers.[15] There are two farm foremen and one mechanic who belong. Other farm labor and the unskilled and semiskilled laboring groups are unrepresented in the organization. Many of the members live outside Arvin and belong because they have Arvin property or other interests in the community. These are included in the above tabulation.

The Lions Club has been organized but a few years. Prior to its organization there was no association of merchants in the community. With a much shorter history than the Booster Club, it cannot point to as many successful projects, though it performs very much the same kind of function. Its major service to date has been the bringing together of the merchants. According to several members of the Lions Club, the Boosters are predominantly interested in matters pertaining to farmer welfare, and for that reason the need for a separate civic organization was acute. Some anxiety over farmer control of the Lions Club was expressed. Of the 42 members of the Lions, 29 are merchants or professional people and 11 are farm operators (table 26). The remaining two are in the service trades. There are 27 persons (nearly two-thirds of total Lions membership) who have membership in both organizations.

The Arvin Farm Center has 70 members, of which 7 are nonfarmer "sustaining" members. The remaining 63 are farmers, and 34 of these operate less than 80 acres and 38 under 160 acres. The chairman of the center made the observation that "the small farmers attend center meetings more regularly than do the large farmers but the larger farmers seem to take more active part in the working of the organization." The Farm Center is a local organization of the county farm bureau and carries out the excellent educational work of that organization. There i[illegible] purely social aspect to the Farm Center meeting, for the men and women frequently have suppers and other social events.

The Parent-Teacher Association is the only social group which endeavors to bring together all classes in the community. Its service is to promote the welfare of the school and develop parent interest in school activities. The primary problem of the PTA is to maintain interest and develop adequate leadership. This problem is acute in Arvin, and it is difficult to get anyone to serve as chairman and to get many mothers to participate. The chairman at the time of the field studies was particularly anxious to develop the inherent value in the organization. She made two attempts to develop recreational facilities for the children. On Halloween the PTA put on a carnival, which was formerly a regular event but which had not been held for several years. The various organizations and groups had concessions, and in this way the PTA made quite a bit of money. It was a success from the recreational standpoint, as the children came in great numbers and talked of it for weeks later. However, there were some people who objected to it because the children trampled the grounds around the community hall and did other minor damage. The other activity was a "fun night." For 2 hours each Friday night schoolrooms were made available for children to play games. It was difficult to get sufficient chaperones; and, according to the chairman, the very persons who complained about the lack of facilities for their children consistently refused to help in these events. Some objected to the children dancing, others insisted that it close at 9 p. m., which didn't give the children a satisfactory and full evening. The chairman went on to say: "Some women felt this was for the riffraff and the poor people and they would not let their nice girls go to the fun night, and this was wrong and in direct opposition to the very purpose of the fun nights." After seven evenings the program was abandoned because of lack of interest and insufficient parent participation. Other persons had spoken of the rowdyism and vandalism at these community events, but neither the chairman nor the sheriff considered this a serious problem. "What," she said, "if they do a little damage? Why have these facilities unless you use them?"

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[15] Occupational break-downs of all club members analyzed are given in table 26.

The chairman felt that the participation of labor parents was very desirable and endeavored to get it, claiming that nobody tried to bring laborers into the meetings before. Her efforts have not been very successful. At one meeting it was possible for the principal to point out the single "Okie" present. The PTA is the only nonreligious organization in which this group participates. Of the 56 members classified, 8 are farm laborers and 9 are other classes of workers. About 30 percent of the members are from the laboring group (table 26, p. 67). White-collar people account for half of the membership and farmers for a fifth.

These organizations (and the State guard, which probably performs some recreational and social purposes in addition to its protective function) are all the organized social groups in the community. The Weedpatch Grange is an active group of small farmers, but practically none of the members live within the Arvin boundary, and the meeting place is outside it, too. There are no veterans' organizations, no lodges, no women's clubs, no sport clubs, or any other social group. Those who can afford it participate in Bakersfield "society."

A complete cataloging of the Dinuba social activities is more difficult because of the greater amount and variety of social life. An appreciation of the complexity can be obtained by a list of the major organizations. Dinuba merchants have two associations, the chamber of commerce and the business men's association, to serve their interest. In addition to this, there are two "service clubs," the Rotary, the Y's Men's Club, and the semisocial and purely local Young Business Men's Club. The volunteer firemen form a club which has a social function as well as its service to the community. The American Legion has a strong post, with a large and active membership, and a Legion auxiliary. There is a Masonic order with chapters of the Eastern Star, the Rainbow Girls, and the DeMolay. Women may belong to any of several clubs, the Dinuba Women's Club, the Garden Club, the Dinuba Women's Music Club, or to the Palace Club, a study group made up of old residents. Dinuba has an active chapter of the American Red Cross, which has its own meeting hall. There is one Parent-Teacher Association for the elementary school. Two farmer organizations, the Farm Center (with a home center) and the Grange, are active.

The PTA in Dinuba appears to be quite weak, with but few members and little activity. They formerly sponsored a "penny carnival" each year, but this was discontinued during the war. They had previously sponsored a Cub Scout pack, and this has been resumed though was not active at the time the field work was being done.

There is no association for the high school, and the elementary schools are consolidated into one Parent-Teacher Association.

Elsewhere in this report are presented some of the outstanding activities of different clubs and their contribution to the community. A few general remarks will suffice here. These groups bring the following facilities for social gatherings to Dinuba: A hall for the meeting of the lodges, a large hall and park belonging to the American Legion, the clubhouse of the Women's Club, the recreation center and meeting place of the Y's Men's Club, and the Red Cross clubhouse. (See fig. 13.) These facilities do not merely serve the members but are available to the whole community. The Legion park has been used for picnics and carnivals, the Women's Club clubhouse is used for weekly dances of the high-school set, and the Y's Men's Club room is a recreation hall 6 nights a week.

Like Arvin clubs, the Dinuba associations tend to serve only certain elements in the population. While farm labor constitutes a third of the Dinuba population, it rarely belongs to social organizations in the community. Membership lists for the Rotary and women's clubs show no representatives of this group and only 8 percent of the American Legion membership are laborers.

Dinuba citizens have a complement of organizations which serve the community, and the number of persons who participate in them is greater. In Dinuba 45 percent of the families have a member who participates in some social activity, as against 32 percent in Arvin. Table 27 shows that each major category of club, except the PTA and youth organization, has a larger participation in Arvin than in Dinuba.

Both the analysis of memberships and the schedule data show that in both communities the laborer rarely participates in any social organization. Table 28 shows the number and percent of the families in each occupation group having membership in any organization. This tabulation shows that the white-collar worker participates most fully, the farmer nearly as much, the town laborer much less, and the farm laborer hardly at all. In Arvin the farmer and the white-collar worker participate equally, and the Arvin grower participates more frequently than the Dinuba farmer. There is somewhat more social participation among the Dinuba townspeople and farm laborers than among those groups in Arvin, but these differences are not great. A test of the statistical significance of these data shows that participation in clubs is highly associated with occupation status (appendix F).

The individual participation in organizations, as shown by the schedule data, is summarized in table 29. The number of memberships held by all members of the family 12 years old or over were recorded. No distinction is made between types of organization, membership in or outside of the community, or frequency of meetings. Basing these memberships on the number of persons 12 or over within the occupation groups and eliminating those who failed to answer this question, the number of memberships per 100 persons was calculated. This analysis further demonstrates the social segregation between farmer and white-collar worker on one hand and laborer on the other. This wide gulf exists in both communities, though there is somewhat more labor participation in Dinuba. It should be noted that in Arvin the farmers participate far more heavily in clubs than in Dinuba, where farmer memberships are but a third as great as memberships of white-collar workers. Total participation is less in Arvin than in Dinuba, a difference which again is accounted for by the preponderance of laborers, who rarely participate in club activities because of the strong social barrier in both communities. These relationships are shown graphically in figure 14, along with other forms of participation.

OTHER SOCIAL PARTICIPATION

Organized club life is only one means of social participation. In order to obtain some appreciation of the nature of social life in the two communities, questions were included on the schedules designed to determine how many persons participated in other types of social activities. Six categories were included and an indication of the family member participating and the frequency of such participation. The six categories are: School events, other community events, dances, card parties or games, picnics, and movies. The last of these cannot be strictly considered a social event, since it does not require any active group participation and will be discussed separately.

Table 30 shows the number and percent of the families having members who participate in each of the five types of social activities (movies excluded) and the number reporting participation in some one of the five. Of these forms of recreation, picnics are the most frequent in both communities and about equally popular in each. The difference between Arvin and Dinuba is shown immediately in that only 58 percent of all families participate in social events in Arvin, while 71 percent do so in Dinuba. If those persons whose only form of recreation was picnics (which are usually family affairs) are eliminated, the Arvin participants would be reduced to 45 percent of the families, while the Dinuba participating families would not be reduced at all. Participation in community events and school affairs is relatively more popular in Dinuba than in Arvin. The failure of the community to provide opportunity must be considered a major cause of this lack of participation. Table 31 shows similar data, based upon individual participation rather than families. It represents more accurately the participation of individuals, demonstrates the degree to which total families participate in picnics and in general community events, but only a few members participate in the other activities.

Participants in general community events more nearly represent a Table 32 shows the participants by major occupational groupings, and relatively little difference is found. The Chi Square Test indicates that the probability of these occupational differences being significant is relatively small, and the value of *T* for these communities is very close to zero (appendix F). That laborers participate in open social events very nearly as much as other groups shows that social participation is not foreign to the laborers' mode of life and that their failure to belong to clubs in both Arvin and Dinuba reflects the social barrier rather than any inherent reluctance to participate in social events. Striking, too, is the difference in the degree of social participation among farm labor families in Dinuba as compared with Arvin. It is clear that the greater opportunity for social activity coupled with a somewhat lessened social barrier has enabled the worker to find a

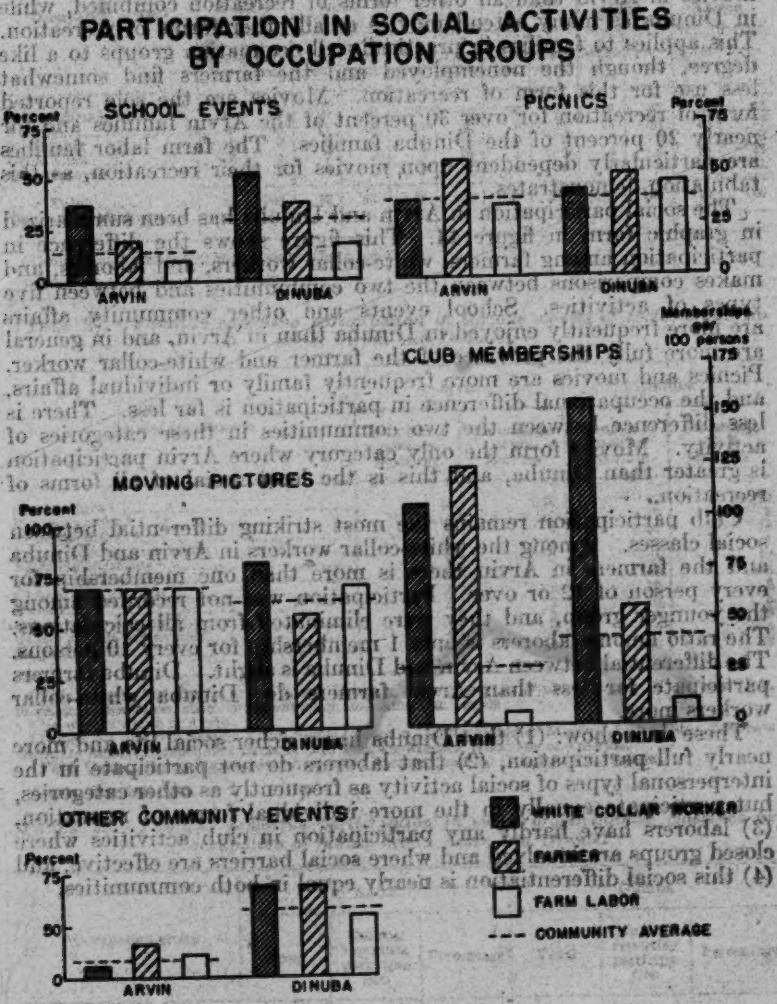
PARTICIPATION IN SOCIAL ACTIVITIES
BY OCCUPATION GROUPS
SCHOOL EVENTS
Percent
75
50
25
0
ARVIN
DINUBA
PICNICS
Percent
75
50
25
0
ARVIN
DINUBA
CLUB MEMBERSHIPS
Memberships per 100 persons
175
150
125
100
75
50
25
0
ARVIN
DINUBA
MOVING PICTURES
Percent
100
75
50
25
0
ARVIN
DINUBA
OTHER COMMUNITY EVENTS
Percent
75
50
0
ARVIN
DINUBA
WHITE COLLAR WORKER
FARMER
FARM LABOR
COMMUNITY AVERAGE

FIGURE No. 14

richer social life. Social participation of the farm-operator group in the two communities is about the same.

Motion pictures have become the most important form of recreation to nearly all groups. Table 33 shows many more families attend movies in Arvin than all other forms of recreation combined, while in Dinuba as many attend movies as all other forms of recreation. This applies to families in practically all occupation groups to a like degree, though the nonemployed and the farmers find somewhat less use for this form of recreation. Movies are the sole reported form of recreation for over 30 percent of the Arvin families and for nearly 20 percent of the Dinuba families. The farm labor families are particularly dependent upon movies for their recreation, as this tabulation demonstrates.

The social participation in Arvin and Dinuba has been summarized in graphic form in figure 14. This figure shows the difference in participation among farmers, white-collar workers, and laborers, and makes comparisons between the two communities and between five types of activities. School events and other community affairs are more frequently enjoyed in Dinuba than in Arvin, and in general are more fully the province of the farmer and white-collar worker. Picnics and movies are more frequently family or individual affairs, and the occupational difference in participation is far less. There is less difference between the two communities in these categories of activity. Movies form the only category where Arvin participation is greater than Dinuba, and this is the least social of all forms of recreation.

Club participation remains the most striking differential between social classes. Among the white-collar workers in Arvin and Dinuba and the farmers in Arvin there is more than one membership for every person of 12 or over. Participation was not recorded among the younger group, and they were eliminated from all calculations. The ratio among laborers is only 1 membership for every 10 persons. The differential between Arvin and Dinuba is slight. Dinuba farmers participate far less than Arvin farmers do; Dinuba white-collar workers more.

These data show: (1) that Dinuba has a richer social life and more nearly full participation, (2) that laborers do not participate in the interpersonal types of social activity as frequently as other categories, but participate equally in the more individual forms of recreation, (3) laborers have hardly any participation in club activities where closed groups are involved and where social barriers are effective, and (4) this social differentiation is nearly equal in both communities.

TABLE 26.—*Occupation of members in selected Arvin and Dinuba clubs*

Occupation group [1]	Arvin clubs						Dinuba clubs					
	Booster		Lions		PTA		Rotary		Women's Club		American Legion	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
White-collar workers	39	46	29	69	27	48	36	84	57	57	58	53
Farmers	40	48	11	26	11	20	6	14	34	34	29	26
Farm labor	2	2	0	0	8	14	0	0	0	0	8	7
Other labor	3	4	2	5	9	16	1	2	3	3	14	13
Nonemployed	0	0	0	0	1	2	0	0	6	6	1	1
Total	84	100	42	100	56	100	43	100	100	100	110	100
Employment unknown	2	------	0	------	12	------	0	------	1	------	37	------

[1] Occupation classification according to family head.

Source: Club records.

TABLE 27.—*Families reporting participation in various classes of social organizations: Arvin and Dinuba*

Type of organization	Arvin		Dinuba	
	Number of families reporting	Percentage of all families	Number of families reporting	Percentage of all families
Service clubs [1]	13	10	43	20
Women's clubs [2]	------	------	19	9
Fraternal orders [3]	9	7	32	15
Parent-Teacher Association	14	11	14	7
Farm organizations [4]	9	7	26	12
Youth organizations	6	5	10	5
Church organizations	4	3	10	5
Unions	2	2	10	5
Others inside community	4	3	11	5
Others outside community	4	3	10	5
No participation	91	69	118	54

[1] This category includes in Arvin: Lions, Boosters, State guard; in Dinuba: Rotary, Y's Men's Club, merchants association, chamber of commerce, and American Legion.

[2] No women's club in Arvin.

[3] None meet in Arvin, though Arvin people belong; in Dinuba includes: Masons, Eastern Star, Rainbow Girls, De Molay, Independent Order of Odd Fellows, Modern Woodmen of America.

[4] Farm Center, Home Department, Associated Farmers, and (in Dinuba only) Grange.

Source: Schedule data.

TABLE 28.—*Families reporting participation in social organizations, classified by occupation of family head: Arvin and Dinuba*

Occupation group	Arvin			Dinuba		
	Total	Number reporting participation	Percentage	Total	Number reporting participation	Percentage
White-collar workers	10	7	70	38	32	84
Farmers	14	10	71	66	43	65
Farm labor	80	14	17	56	11	20
Other labor	20	8	40	27	10	37
Nonemployed	8	2	25	24	3	13
Total	132	41	31	[1] 213	100	47

[1] Information on 7 families lacking.

Source: Schedule data.

TABLE 29.—*Club memberships of persons 12 years old and over, classified by occupation of family head: Arvin and Dinuba*

Occupation groups	Arvin			Dinuba		
	Persons 12 and over	Memberships reported		Persons 12 and over	Memberships reported	
		Total	Per 100 persons		Total	Per 100 persons
White-collar worker	36	34	93	79	128	185
Farmer	37	46	124	166	95	57
Farm labor	230	17	7	156	20	13
Other labor	54	19	35	93	20	22
Nonemployed	15	3	20	32	5	16
Total	372	109	29	615	259	42

Source: Schedule data. Numbers refer to behavior of individuals in sample, not whole community.

TABLE 30.—*Families participating in social activities other than clubs and churches: Arvin and Dinuba*

Class of social activity	Arvin		Dinuba	
	Number reporting participation [1]	Percentage	Number reporting participation [1]	Percentage
School events	24	20	70	33
Other community events	12	9	95	45
Dances	19	14	49	23
Card parties	10	8	29	14
Picnics	53	39	91	43
All social events [2]	76	56	148	71

[1] Each family reported only once, no matter how many members participate, or how frequently or in how many types of events.

[2] Not the sum of column; represents all families participating in any one or more of above categories of social activity.

Source: Schedule data.

TABLE 31.—*Individuals participating in social activities other than clubs and churches: Arvin and Dinuba*

Class of social activity	Arvin		Dinuba	
	Number reporting participation	Percentage	Number reporting participation	Percentage
School events	88	16	266	25
Other community events	51	9	231	22
Dances	38	7	96	13
Card parties	15	3	55	5
Picnics	200	36	256	30

Source: Schedule data.

TABLE 32.—*Families reporting participation in social events other than clubs or churches, classified by occupation of head: Arvin and Dinuba*

Occupation group	Arvin		Dinuba	
	Number reporting participation	Percentage	Number reporting participation	Percentage
White-collar workers	8	80	36	90
Farm operator	9	70	44	72
Farm labor	48	64	37	74
Other labor	32	60	28	80
Nonemployed	4	30	15	56
Total	78	59	146	71

Source: Schedule data.

TABLE 33.—*Motion pictures as a source of recreation for different occupation groups: Arvin and Dinuba*

Occupation group	Arvin				Dinuba			
	Families reporting movie attendance [1]		Families reporting movies as only recreation [2]		Families reporting movie attendance [1]		Families reporting movies as only recreation [2]	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
White-collar workers	9	90	1	10	35	88	2	7
Farm operator	10	77	2	15	30	64	5	12
Farm labor	66	88	29	39	45	82	16	29
Other labor	17	85	6	30	28	74	9	25
Nonemployed	8	62	3	23	7	30	3	13
Total	110	84	41	31	145	71	35	16

[1] All families reporting some member who attends motion pictures.

[2] All families who attend motion pictures in which no member participates in any other social activity.

Source: Schedule data.

THE PROBLEMS OF YOUTH

The conditions under which the young people are brought to adulthood is one criterion of the quality of a community. Since it is a sphere of activity in which the local population has a great deal of influence, the youth programs reflect community spirit.

Juvenile delinquency is a universal problem varying only in degree; it has been a particularly great problem during war years, and people in both Arvin and Dinuba were concerned with it. No statistical data were available on delinquency rates, but verbal testimony is indicative. This testimony was obtained from various school officials, county officers, and local leaders, and represents informal local opinion.

Such testimony brought out that the problem exists in both communities, but is far more severe in Arvin than Dinuba. In both communities cases involving sexual promiscuity had recently been reported, and were mentioned by the citizens of the two towns. The Dinuba incident was a single affair and was played up in local papers, while the Arvin case involved a number of students over a period of time. Theft and pilfering were reported from both communities, but gambling apparently was a severe problem in Arvin only. In Dinuba, the justice of the peace considered the problem noteworthy, while the school principals, the mayor, and the PTA president stated that a few cases came up from time to time but the problem was not severe. The justice pointed out that it was associated with broken homes and poor economic conditions, and all agreed that the incidence of misbehavior was highest among the labor families. In Arvin the school principal, one merchant, and two of the ministers found the problem great and emphasized sexual promiscuity and gambling. The justice of the peace, one county sheriff, and one minister admitted to a real problem but did not emphasize it, while another sheriff and the PTA president did not consider it severe. While these accounts were at variance, they suggest that if the Dinuba situation is described as normal, the social conditions of Arvin youth must be considered bad. The association of juvenile delinquency with the laboring class, particularly children of white field hands, was generally agreed upon.

For purposes of the present study, community efforts to prevent juvenile delinquency are far more significant measures than the incidence of delinquency itself. For the latter may have many causes, while the efforts to prevent delinquency by means of social programs are direct testimonial to the degree of community solidarity and its social quality.

In Arvin, at the time of field study, the only active program was a series of baseball games for the older boys. This had been in progress for several weeks, and had the support of the sheriff's office and unofficial aid from the Lions Club. In addition there was a small Boy Scout troop and a Camp Fire Girl organization.

One Arvin merchant who took an active interest in community welfare became alarmed by the juvenile problem and determined to find why no county funds had been spent on playground facilities in Arvin. He discovered that no request had been made, and as a result of his action, Arvin secured lighting and equipment for the empty lot that had been loaned for use as a playing field by a private company. The lack of leadership was constantly cited as the cause for the dearth of facilities. The school superintendent contended that the Boy Scouts should be led by persons other than teachers but that nobody else would take the job and that it was often difficult to get the board of review out for a review meeting. The school itself sponsors a program of athletics for the children, and the school has a safety club and a youth council. These activities do not extend beyond school hours, and do not reach any of the young people beyond elementary-school age.

In Dinuba there are two Boy Scout troops, each with its own clubhouse. These are sponsored by the Rotary and the American Legion. A third troop is being planned and a Cub Scout pack has recently been organized. There is also a Girl Scout group sponsored by two teachers. The Masonic Lodge has a Rainbow Girls and a DeMolay group; there are weekly dances held by the high-school students at the women's club, and the Y's Men's club maintains a recreation hall.

This hall was created out of an old store building. A paid supervisor is on duty each night, and facilities for billiards, table tennis, shuffleboard and for reading and the cultivation of hobbies are [illegible] available there. The place accommodates from 30 to 80 boys ea[illegible] night in the week without any cost to them. As a public service, the establishment of this recreation hall deserves special merit because it was made available to the Dinuba youth at a real sacrifice in time and money by a group of citizens. It contrasts with the endeavor of a few public-spirited personalities who attempted to create a weekly "fun night" at the Arvin school and failed because of the lack of interest among community leaders and their unwillingness to make the necessary sacrifices.

These activities in Dinuba are over and above those made possible by the schools and the general park facilities available to the boys and girls. The difference between the two communities can be summarized as follows: An Arvin high-school youth can participate in ball games once or twice a week and can go to Scout meetings. Otherwise his only recreation is at the movies, a commercial skating rink open during the summer, or the pool halls. A Dinuba youth can go to a dance, play either on the school grounds under supervision or at a park, participate in high-school activities, can go to Scout meeting or to the DeMolay (or Rainbow) meeting, can spend his evenings in the recreation center, or can participate with others under supervision in one or more hobbies. There are three moving-picture theaters and a commercial dance hall, if he wishes to pay for his recreation. County libraries are available in both communities. Obviously the opportunities for social contacts and personal development are greater for the Dinuba youth than for those of Arvin.

It should be added that the Dinuba facilities are not locally considered adequate. Neither community has a swimming pool, and this lack is very keenly felt. There is insufficient playground equipment in the park, and there is no counterpart to the recreation center for the use of girls. At one time there was a WPA-sponsored recreation program which, according to the justice of the peace, lessened juvenile misbehavior. High-school students presented a symposium to the Dinuba Rotarians on juvenile delinquency and concluded that more facilities were needed.

THE SOCIAL ROLE OF THE CHURCH

Arvin has the following churches: Catholic, Union Congregational, Church of the Nazarene, Assembly of God Church, Missionary Baptist, Church of Christ, and Pentecostal. At some times there is a second Pentecostal church serving the Mexicans, and there is a group of adherents to Jehovah's Witnesses.

In Dinuba there are: Presbyterian, Christian Church, Methodist, Baptist, Seventh-Day Adventist (two groups), Zion Mennonite, Mennonite Brethren, Church of the Nazarene, Church of God, Assembly of God, Church of Christ, Four Square Church, Korean Presbyterian, and an Armenian Church. Prior to evacuation there was a Japanese Buddhist group and there has also been a Mexican Methodist congregation, while Mormons, Catholics, and Lutherans have meetings periodically in Dinuba, though no regular church. Both in the number of congregations and in the total amount of church facilities available, the Dinuba community is richer.

Despite the large number of churches in both communities, only about two-thirds of the population are either members or attend church regularly.[35] Table 34 shows that only 59 percent of Arvin persons 12 or over are church participants, against 72 percent in Dinuba. Each occupational group in Dinuba shows this greater participation. In both communities farmers have the highest record of memberships (leaving out nonemployed), farm labor next, while white-collar workers and other labor participate least.

TABLE 34.—*Individual church participation among persons 12 years old and over, classified by occupation groups: Arvin and Dinuba*

Occupation group	Arvin			Dinuba		
	Number in group	Partici-pants	Percent	Number in group	Partici-pants	Percent
White-collar worker	26	12	46	79	48	61
Farm operator	37	25	68	150	118	79
Farm labor	240	153	64	186	130	70
Other labor	54	25	46	78	48	61
Nonemployed	15	7	47	24	24	100
Total	372	221	59	517	370	72

N. B.—Church participants are all persons over 12 who either are members of a church in good standing, or who attend church at least 12 times per year. Number in group includes only persons 12 years old or over.

Source: Schedule data.

While club membership is a function of income and occupation, and nonorganized social activities show slight differentials between occupation groups, no such generalization can be made for participation in religious institutions. The percent variation between occupational categories in Arvin ran from 46 to 68 of the several major occupational groups; for Dinuba from 61 to 100 percent. The differential did not meet the Chi Square test of significance in either community. (See appendix F.)

Interestingly, there is a tendency for low-income groups in Arvin to belong to churches more frequently than high-income groups, the direct opposite to the tendency in other forms of social participation. This is shown by a negative association between high occupation status and church membership—an association which fully meets the Chi Square test of significance. This partly explains why only one church is supported by the Arvin elite.

Since social criteria have been reflected in church participation elsewhere in California,[36] it is appropriate to examine the manner in which different elements of the population are segregated in existing religious institutions. In order to make such an analysis it is necessary to evaluate the social position of the different congregations in each community.[37] Eliminating memberships in groups without a formal organization in either town, a fourfold classification is suggested. Most congregations can be rated, on a pecuniary standard of values, into degrees of social standing, but some cannot. In the latter category, are the Catholic churches and those congregations which have a fairly recent history of persecution and wandering or for other reasons maintain strong in-group loyalties. Mennonite and Seventh-Day Adventist churches are included here. Congregations such as the Korean Presbyterian and Armenian churches, which serve only special racial or ethnic groups, are also placed in this category. These examples make up the Dinuban category of strong in-group churches, while in Arvin only the Catholic church was so classed.

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[35] All persons who belong to a church, whether or not they attend, and all persons who attend 12 or more times per year, even though not a member, are included in this count. Only persons 12 years old or older were included in this analysis.

[36] The role of the church in the California town has been described in Walter R. Goldschmidt, Class Denominationalism in Rural California Churches, American Journal of Sociology, vol. XLIX, January 1944.

[37] It must be made clear that this analysis of church standing does not in any way reflect an evaluation either of the religious doctrines or of the quality of the membership of the separate congregations, but has reference only to the social status of the group within the community, with reference to community values, as the sociologists use that concept.

The remaining three categories represent the social standing of the church in terms of dominant pecuniary standards. The upper group includes the earlier denominations of Protestantism; in Arvin the Union Congregational and in Dinuba the Presbyterian, Christian, Methodist, and Baptist. They universally have substantial buildings and are the first recognized by the elite in the population. The second group is comprised of those newer denominations of Protestantism which have firmly established themselves in the local community. In both towns the Nazarene and Assembly of God churches are so classed. These congregations have good structures, professional pastors, and are recognized by the community as good substantial congregations. The third category consists of those churches which have poor facilities—usually unpainted frame structures without any elegance. Generally they are served by lay ministers. The elite hardly recognize their existence. In Arvin this group includes the Missionary Baptist, Pentecostal Church, Church of Christ, and Jehovah's Witnesses; in Dinuba the Church of God, the Four Square Church, and the Church of Christ.

Using this classification, we find that there are four churches of high and more or less equal status in Dinuba, but only one in Arvin, and that they account for 37 percent of the membership in Dinuba and 14 percent of Arvin churchgoers (table 35). Churches of lesser social standing are predominant in Arvin but unimportant in Dinuba. A large number of Dinubans go to other communities because of their desire to participate in particular denominations, and because there are a number of other churches within a few miles of the community. Sixty percent of Arvin laborers go to churches of the newer sects with less social status in the community, against but 36 percent of the independently employed. A similar differential between the two occupation groups is found in Dinuba. While all groups go to church to very nearly the same extent, they do not go to the same churches but are segregated along occupational lines. The degree of association is shown in the table of appendix F.

Approaching the data from a different source, the pattern of membership in certain churches can be shown. Table 36 shows the occupational break-down of the three leading Protestant churches in Arvin, and five of the churches in Dinuba. Figure 15 summarizes this tabulation and shows the marked divergence between these congregations with respect to the means of livelihood of their members. Verbal testimony indicated that laborers only belonged to the remaining Arvin Protestant Congregations. The churches of high social status in Dinuba as in Arvin, have few farm workers among their members, but there are more churches which serve a mixed congregation and more persons who participate in church affairs together with persons from other walks of life.

TABLE 38.—*Proportion of persons from independently employed families and from labor families participating in churches of different social status: Arvin and Dinuba*

Church category	Arvin						Dinuba					
	Farmers and white-collar workers		All labor		Total [1]		Farmers and white-collar workers		All labor		Total [1]	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
I. High status	15	40	13	8	28	14	87	51	42	26	129	37
II. Intermediate status	8	22	[illegible]	21	[illegible]	21	4	2	7	4	11	3
III. Low status	5	14	[illegible]	[illegible]	[illegible]	[illegible]	16	9	[illegible]	[illegible]	[illegible]	[illegible]
IV. In-group churches	9	24	[illegible]	[illegible]	[illegible]	22	[illegible]	20	[illegible]	[illegible]	[illegible]	[illegible]
V. Other	0	0	[illegible]	[illegible]	[illegible]	[illegible]	9	5	[illegible]	7	[illegible]	7
VI. Outside community	0	0	5	3	5	2	[illegible]	14	[illegible]	[illegible]	[illegible]	17
Total	37	100	157	100	[illegible]	100	[illegible]	100	[illegible]	100	[illegible]	100

[1] Includes 7 nonemployed in Arvin, 34 in Dinuba.

Source: Schedule data.

TABLE 39.—*Occupation of members of selected churches in Arvin and Dinuba*

ARVIN

Occupation group	Congregational		Nazarene		Assembly of God	
	Number	Percent	Number	Percent	Number	Percent
White-collar	[illegible]	10	16	30	10	10
Farm operator	[illegible]	[illegible]	5	10	0	0
Farm labor	[illegible]	[illegible]	16	[illegible]	81	77
Other labor	13	[illegible]	17	[illegible]	14	13
Total	[illegible]	100	54	100	105	100
Nonemployed	[illegible]		4		7	

DINUBA

Occupation group	First Presbyterian		Christian		Zion Mennonite		Church of Nazarene		Assembly of God	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
White-collar	100	47	[illegible]	[illegible]	16	8	17	20	[illegible]	[illegible]
Farm operator	94	[illegible]	[illegible]	[illegible]	141	71	[illegible]	[illegible]	[illegible]	[illegible]
Farm labor	6	3	7	5	[1] 25	13	[illegible]	[illegible]	[illegible]	[illegible]
Other labor	15	7	16	11	16	8	[illegible]	[illegible]	14	[illegible]
Total	[illegible]	100	[illegible]	100	[illegible]	100	[illegible]	100	[illegible]	100
Nonemployed	34		[illegible]		28		17		[illegible]	

[1] Includes some unspecified labor.

Source: Schedule data.

In Arvin there were clear expressions of opinion as to the social standing of the churches. Local citizens can and regularly did rate them. There is a similar social hierarchy in Dinuba, but it is not so clearly marked, and there are far more churches serving small social groups isolated because of a common background rather than because of their social or economic status in the community.

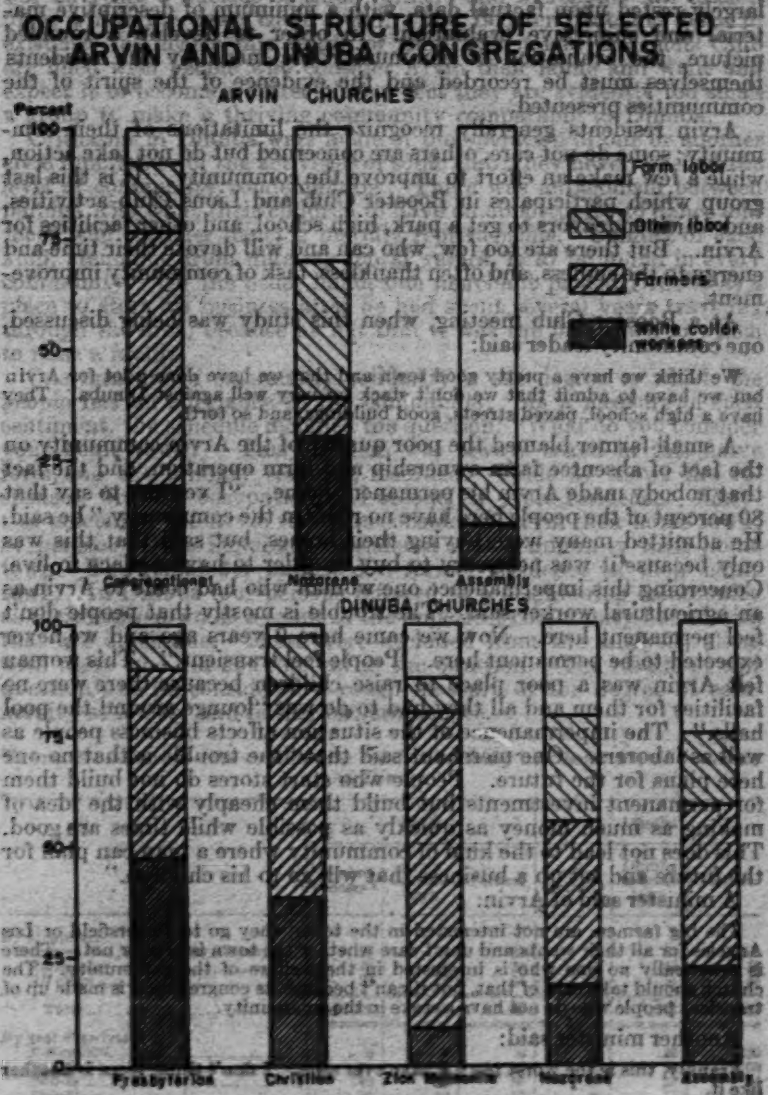
OCCUPATIONAL STRUCTURE OF SELECTED ARVIN AND DINUBA CONGREGATIONS
ARVIN CHURCHES
Percent
100
75
50
25
0
Farm labor
Other labor
Farmers
White collar workers
Congregational
Nazarene
Assembly
DINUBA CHURCHES
100
75
50
25
0
Presbyterian
Christian
Zion Mennonite
Nazarene
Assembly

Figure No. 15

SOCIAL EVALUATIONS

Thus far the description of the social life in Arvin and Dinuba has largely rested upon factual data, with a minimum of descriptive material and subjective evaluation. In order to develop a rounded picture, the evaluation of community life made by the residents themselves must be recorded and the evidence of the spirit of the communities presented.

Arvin residents generally recognize the limitations of their community; some do not care, others are concerned but do not take action, while a few make an effort to improve the community. It is this last group which participates in Booster Club and Lions Club activities, and which endeavors to get a park, high school, and other facilities for Arvin. But there are too few, who can and will devote their time and energy to the endless, and often thankless, task of community improvement.

At a Booster Club meeting, when this study was being discussed, one community leader said:

> We think we have a pretty good town and that we have done a lot for Arvin but we have to admit that we don't stack up very well against Dinuba. They have a high school, paved streets, good buildings, and so forth.

A small farmer blamed the poor quality of the Arvin community on the fact of absentee farm ownership and farm operation, and the fact that nobody made Arvin his permanent home. "I venture to say that 80 percent of the people here have no roots in the community," he said. He admitted many were buying their homes, but said that this was only because it was necessary to buy in order to have a place to live. Concerning this impermanence one woman who had come to Arvin as an agricultural worker said, "The trouble is mostly that people don't feel permanent here. Now we came here 9 years ago and we never expected to be permanent here. People feel transient." This woman felt Arvin was a poor place to raise children because there were no facilities for them and all they had to do was "lounge around the pool halls." The impermanence of the situation affects business people as well as laborers. One merchant said that "the trouble is that no one here plans for the future. People who start stores do not build them for permanent investments but build them cheaply with the idea of making as much money as quickly as possible while times are good. This does not lead to the kind of community where a man can plan for the future and set up a business that will go to his children."

A minister said of Arvin:

> The big farmers are not interested in the town; they go to Bakersfield or Los Angeles for all their wants and don't care whether the town is here or not. There is practically no one who is interested in the welfare of the community. The church should take care of that, but it can't because its congregation is made up of transient people who do not have a stake in the community.

Another minister said:

> Frankly, this is the worst town I have ever seen. I don't think there is another like it.

He pointed to the absence of sidewalks, and blamed the lack on the fact that there were not enough citizens interested in working for the community welfare. He went on to enumerate other failings, such as the failure to incorporate and the lack of parks.

This harsh judgment of the community is coupled with a feeling at the community has the potentialities of growth and improvement. or 25 years a nucleus of small farmers and merchants has existed pon which the town could build. The Booster Club has been in istence for nearly this length of time, and it and the Lions Club e filled with people who consider Arvin their home and want and pect it to become a better place. Yet they are evidently too small group to make a thriving community comparable to Dinuba.

Criticisms in Dinuba were made of the operation of one or another vic function or of the activities of some club; they never reached the vel of community condemnation. There was antagonism between arents who want their children to have an opportunity to dance and ose who consider dancing morally reprehensible. Conflict of such nd, stemming from differing moral values, is to be found in every mmunity. On the other hand, one merchant picked Dinuba as a ace to start his business after he had spent several years traveling rough the area, because he felt that it was the best town in which raise a family.

One measure of community solidarity is the degree to which the ople feel an allegiance to the community. As a measure of such ntiment, the schedule included the question: "What do you consider ur home town?" This question was always asked in this naive rm and the primary response recorded. Table 37 shows the responses, first by occupation and second by years residence. Sixty-wo percent of the Arvin residents considered Arvin their home town; percent of the Dinubans considered that community their home wn. The remainder indicated a former residence as their home wn. In Dinuba four persons referred to a neighboring community their home town as a result of the imperfect community boundaries at are inevitable. These were excluded from the analysis, along ith those who did not respond to the question. The results of this uestion can be considered a rough measure of the degree of comunity solidarity and feeling of permanence.

ABLE 37.—*Persons who consider the local community as "home town" in Arvin and Dinuba* [1]

	Arvin			Dinuba		
	Total responses [2]	Arvin as home town	Percent	Total responses [2]	Dinuba as home town	Percent
y occupation:						
Farmer and white collar worker	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Farm labor	77	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
All other	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Total	129	80	62	[illegible]	176	[illegible]
y year of arrival:						
Before 1920	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	10	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Total	129	80	62	[illegible]	176	[illegible]

[1] Analysis of responses to the question: "What is your home town?" See schedule, appendix A.

[2] Persons indicating neighboring town or failing to respond were eliminated from the analysis.

ource: Schedule data.

Laborers in both communities display the least interest in the community, as would be expected. Similarly, the length of residence plays an important part in the expression of this attitude. In every occupation category and in every length-of-residence category except one, a smaller proportion considers Arvin its home town than considers Dinuba its home town. Even among residents of 15 or more years in Arvin there is an appreciable group which does not consider that community as its home.

THE SOCIAL STRUCTURE IN ARVIN AND DINUBA

The analysis of the association between occupation, income, and the many aspects of social participation and social conditions demonstrates that these characteristics are closely interrelated. Social cleavages separate different segments of the population, and these groups or social classes form a status hierarchy. In some significant respects the social structure of Arvin and Dinuba is alike; in other respects it is different.

While the analysis in the preceding sections has not differentiated social status beyond occupational status, such a differentiation can be made. Table 38 summarizes the more important data on social participation for Arvin and Dinuba. It includes only information on occupation, income, level of living, condition of the home, club participation, and class of church, since these are the items which most clearly reflect social status.

TABLE 38.—*Summary of important social differentiations: Arvin and Dinuba*

Item	Arvin	Dinuba
	Percent	*Percent*
Farmers, proprietors, and professionals as percent of total population[1]	17	43
Percent of population receiving over $2,500 annual income[2]	18	21
Percent of population in upper fourth in level of living index[3]	[illegible]	[illegible]
Percent of population in upper fourth in condition of home index[4]	12	[illegible]
Percent of top ranking club memberships in farmer and white-collar group[5]	[illegible]	[illegible]
Percent of top ranking church memberships in farmer and white-collar group[6]	76	[illegible]

[1] From table 22.
[2] From table 23.
[3] From figure 9. Includes all with index of 37 and over, or 24 percent of combined sample.
[4] From figure 11. Includes all with index of 6 (perfect score) or 27 percent of combined sample.
[5] From table 24. Includes Booster and Lions in Arvin and Rotary and Women's Club in Dinuba.
[6] From table 25. Includes Congregational Church in Arvin and First Presbyterian and Christian in Dinuba.

It will be seen that the upper bracket in Arvin represents from 12 to 18 percent of the families for each of the first four items indicated, while similar break-downs include from 21 to 43 percent in Dinuba. This leads immediately to the general conclusion that the upper class in Dinuba includes not only a greater number of people, but actually a much larger proportion. The next two items on the table give us an indication of the degree to which this small group dominates social activities in the two communities. It is readily seen that the small group generally includes a dominant proportion of those social activities which bear status in the community.

If we examine more closely the individual cases, we can obtain more evidence of social differentiation. In Arvin there are 10 families in the sample of 122 who were in the top fourth of income, of level-of-living index, and of the condition of the home index. Nine of these were either merchants or farm operators. These nine families either belonged to the top-ranking church or to none at all. The 23 persons 12 years old or over in this group hold a total of 53 memberships, including all reported memberships in the Lions Club and all but one in the Boosters. Another group of eight farmer and white-collar families having good incomes and living conditions (i. e., above median in both categories) can be separated. This group has some members in churches other than that with highest social standing, 1 of its group s a Booster, and among them hold 15 club memberships. The remaining seven families in the farmer-white-collar group do not participate in the older congregation, and among them hold only two club memberships. On the basis of what we know about social status n the community, we may therefore say that this last group has a status commensurate with the laborers.

These facts indicate that the upper class in Arvin comprises between 10 and 15 percent of the total resident population. Their ranks are not significantly augmented from among the labor group. Selecting those among the laborers who are in the upper half (not quartile) of income, level-of-living index, and index of home conditions, we find a group of 11 families. Only one of these belongs to the upper-class church while there are only nine club memberships among them. One skilled laborer in the group might qualify, since he participates in social activities rather frequently.

After eliminating the occupational group which meets the general criteria of upper class, there remain 115 families in the sample, representing 87 percent of the population. Of this group, only 21 hold memberships in local organizations, while 71 families belong to some local church. In all, about 75 families participate in some local activity, though these ties are frequently tenuous and often only with a handful of other persons with equally tenuous ties. If we eliminated those who only participated in the newer religious sects with but slight ties to the whole community, the number would be reduced from 75 to 50, or from two-thirds to less than half of the total population n this status group. Those who participate in organized social events also more frequently participate in group recreation than those who belong only to the church or to no organization at all. Twenty-seven families reported no membership in any community organization and no form of social participation other than movies or picnics (which are usually individual family affairs). This is a fifth of the total population and a fourth of the lower group.

The independent class of Arvin includes between 10 and 15 percent of the families, and is made up of farm operators and merchants, hough such occupation status does not insure membership. They are split evenly between two groups—an elite whose status is estabished and a middle group whose status is less clear. A few families (about 4 in the sample) participate more fully in the society of Bakersield than they do in local events.

The elite are universally in the highest income brackets and have material possessions and housing conditions which place them at the op of these categories as well. It is comprised mostly of farmers with a few from the merchant-professional category. As a group hey hold nearly as many club memberships as all the remainder of he population combined. They frequently participate in the social events in Bakersfield and occasionally in Los Angeles, and are highly mobile, both in the geographic and social sense of that term. If they belong to any church, it is the upper status church.

The middle group has a lower income, poorer living conditions, and generally displays less evidence of social status in the community than the elite. It is made up of the remaining merchants and farmers, with perhaps a few skilled workers among them. They more rarely participate in city activities. This group has some members in churches of intermediate status.

The largely dependent class is made up almost entirely of farm laborers, though a small group of merchants and farm operators, on the basis of evidence of their social participation and living conditions, must be included. On the whole, this group participates very little in any activity other than the church, and rarely in the older church. They never enter the leading clubs. As a group they comprise about 85 percent of the total population, yet they remain outside the sphere of most community activities. A few of the skilled laborers with permanent jobs occasionally breach the line between this group and the upper class, but this is rare.

The church is the most frequent sphere for social contact among members of this class. Nearly two-thirds participate in this form of activity, while less than 20 percent are club members. In this group there are 34 persons (30 percent) whose only social activity is the church, 23 who only participate in community events and other nonorganized activity, and 27 who do not participate at all. Most of these latter groups have no ties whatsoever to Arvin, and the dependent class may be differentiated between those with local ties and those without any social ties whatsoever. Nearly half of the laborers did not consider Arvin their home town. Those who display little or no social participation rarely have an income or level of living index above the median point.

The social structure of Dinuba cannot be reduced to a linear scale with the same degree of accuracy. The greater wealth of institutions and the larger and more diversified stable population combine to create a far more complex situation. The dominant community pattern must be viewed as similar to Arvin, with a group of well-off persons in the upper ranges of level of living on one end of the scale and a group of impecunious laborers with poor living conditions and little or no social participation on the other.

There are 25 farmer and merchant families in the sample who fall in the upper-income brackets and in each of the measurement of living conditions (one laborer family also fell into this group). This 12 percent of the population forms an upper class, but its members must be augmented by another 20 to 25 percent who fall lower in the scale on these measurements, but who participate freely in the same churches and clubs. While there are gradations of prestige within this group, it would be difficult to make a segregation of the sort that was possible in Arvin.

Of the remaining two-thirds, there are quite a few whose social life revolves about their church. These groups are usually centered about the Mennonite, Lutheran, and Seventh-Day Adventist congregations, which develop a strong in-group loyalty and are capable of satisfying completely the social outlets of a large proportion of their congregations. Included among these are many of the stabler small farmers, most of whom own their own land. Such people are usually bypassed by the dominant community pattern of pecuniary values, having their own special interests and spheres of activity. They are not outsiders to community activity in the same sense that farm laborers are. The difference lies in that they have a stable tenure and a community of interests with a segment of the population, and that they can move into the social sphere of the larger community at will, but remain outside by choice. The laborer, on the other hand, does not have this stability, this participation in a small in-group, and can only with great difficulty become a part of the larger community. Many of the more stable farm laborers—often farmers' sons—associate with these special groups, and mobility from laborer to farmer status is apparently more common while less social connotations are involved in this occupation differential.

Only a small segment of the population is without any ties whatsoever. Only 16 in our sample of 206 (8 percent) failed completely to participate in community affairs, compared to about 20 percent in Arvin. Only 13 percent rejected Dinuba as their home town. Some others have only the most tenuous ties with the community, but this group is much smaller, proportionately and absolutely, than the comparable Arvin group.

The fundamental similarity between Arvin and Dinuba is that there are upper and lower classes with little or no common interest or social intercourse; the one made up of independently employed persons and the other made up of wage laborers. The fundamental differences are, first, that in Arvin the upper group is extremely small while the lower group is quite large, whereas in Dinuba the upper group comprises about a third of the population. Second, in Arvin there is a sharp break between the upper group and the remainder, while in Dinuba there are even gradations from one to the other. Furthermore, there appears to be more opportunity for social intercourse, if not between the top and bottom, at least between successive groups so that social contact and mobility are possible without a change of occupation status.

CHAPTER VI

RETAIL BUSINESS IN ARVIN AND DINUBA

INTRODUCTION

Retail business data for enterprises in the two communities were secured from the records of the California State Board of Equalization.[19] The board, along with other duties, keeps the records and accounts of the California sales and use tax, which covers virtually all retail sales with the exception of retail foods. Records are kept, not only on taxable sales but on total retail sales of all enterprises selling taxable items. The Research and Statistics Department of the Board, in cooperation with the Bureau of Agricultural Economics, analyzed the retail sales data for all rural communities in Madera, Kern, and Tulare Counties. They were made in early 1944 and refer to the 12-month period beginning October 1942 and ending September 1943. The use of this time period was dictated by the nature of the data available. Additional material is available on business enterprises from the Dun & Bradstreet Reference Book (January 1942).

NUMBER OF ENTERPRISES AND GROSS VOLUME OF BUSINESS

There is a marked difference in the volume of business and the number of business enterprises between the community of small farms and that of large farms. On virtually identical resource bases, as measured by dollar volume of production of agricultural commodities, the Dinuba merchants do approximately 4⅓ million dollars' worth of retail trade as against about 2½ million dollars' worth among Arvin merchants. On a population basis the dollar volume is somewhat less, but is nevertheless different to a significant degree. The number of business establishments in Dinuba is more than twice the number in Arvin, showing that the small farm population supports small business to a far greater extent.

According to the records of the board of equalization, there were 62 enterprises in Arvin holding a franchise to sell taxable items in the fall of 1943 and 141 in Dinuba, or a ratio of 4 to 9. Dun & Bradstreet listings for January 1942 show even greater divergence with 60 as against 155, or a ratio of less than 4 to 10. Retail trade reported to Arvin for the 12-month period studied was $2,535,000; for Dinuba during the same period it was $4,383,000 (fig. 16). This means that Arvin enjoyed $103 of retail trade for every $100 value of agricultural products, while Dinuba had $171 for every $100 value of agricultural product. Relating retail trade to resident population, we find $407 spent per person in Arvin and $592 per person in Dinuba.[20] These facts are summarized in table 39.

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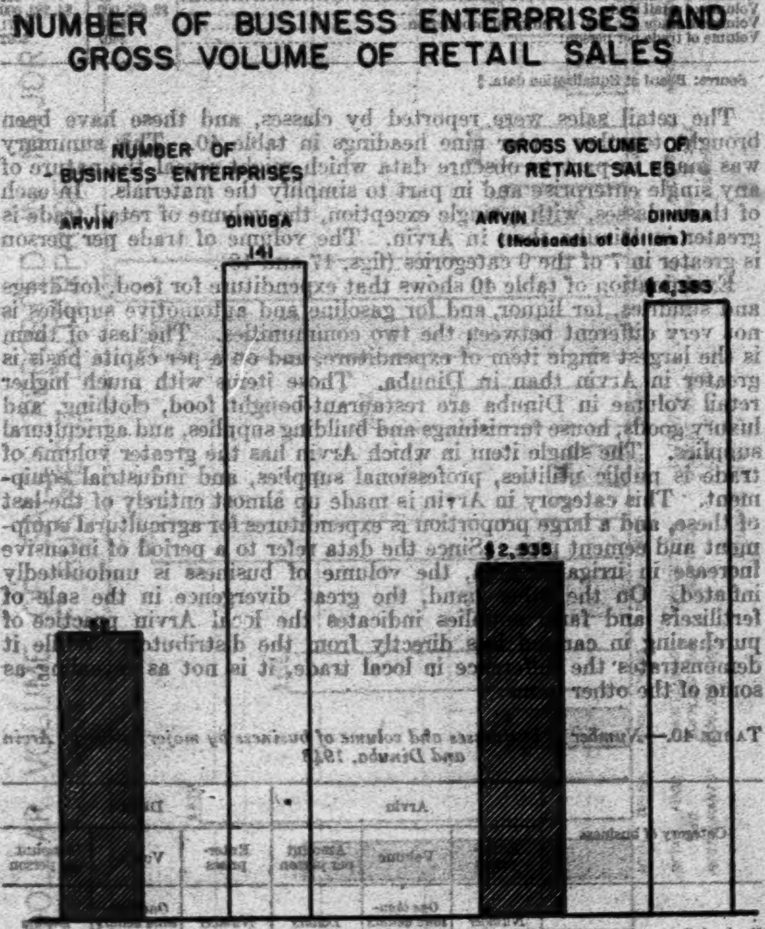
[19] For a full discussion of the methods of developing these data, see appendix G.

[20] Analysis of the retail potentials in communities with differing size of farm units, based upon actual farm practices in California's Central Valley, is presented by J. Karl Lee in his study, Economics of Scale of Farming in the Southern San Joaquin Valley, Calif.. The relative intensity of operation, the greater use of labor on small farms, and most particularly the difference in distribution of farm income all make for greater economic prosperity among merchants and townspeople in the rural community serving small farms.



SOURCE: RECORDS OF THE STATE BOARD OF EQUALIZATION

FIGURE No. 16

Table 39.—*Comparison of business enterprises and volume of business: Arvin and Dinuba*

	Arvin	Dinuba
Number of retail business enterprises	62	141
Volume of retail trade	$2,535,000	$4,383,000
Volume of trade per $100 agricultural production	[illegible]	$71
Volume of trade per person	$407	$583

Source: Board of Equalization data.

The retail sales were reported by classes, and these have been brought together under nine headings in table 40. This summary was made in part to obscure data which might reveal the nature of any single enterprise and in part to simplify the materials. In each of these classes, with a single exception, the volume of retail trade is greater in Dinuba than in Arvin. The volume of trade per person is greater in 7 of the 9 categories (figs. 17 and 18).

Examination of table 40 shows that expenditure for food, for drugs and sundries, for liquor, and for gasoline and automotive supplies is not very different between the two communities. The last of them is the largest single item of expenditure, and on a per capita basis is greater in Arvin than in Dinuba. Those items with much higher retail volume in Dinuba are restaurant-bought food, clothing, and luxury goods, house furnishings and building supplies, and agricultural supplies. The single item in which Arvin has the greater volume of trade is public utilities, professional supplies, and industrial equipment. This category in Arvin is made up almost entirely of the last of these, and a large proportion is expenditures for agricultural equipment and cement pipe. Since the data refer to a period of intensive increase in irrigated area, the volume of business is undoubtedly inflated. On the other hand, the great divergence in the sale of fertilizers and farm supplies indicates the local Arvin practice of purchasing in carload lots directly from the distributor. While it demonstrates the difference in local trade, it is not as revealing as some of the other items.

Table 40.—*Number of businesses and volume of business by major category: Arvin and Dinuba, 1945*

Category of business	Arvin			Dinuba		
	Enterprises	Volume	Amount per person	Enterprises	Volume	Amount per person
	Number	*One thousand dollars*	*Dollars*	*Number*	*One thousand dollars*	*Dollars*
Food retailers	11	592	95	17	712	95
Eating places	4	41	7	8	117	16
Clothing and luxury goods	3	110	18	13	503	67
Home furnishing and household construction	3	238	38	25	662	88
Gasoline, autos, and auto supplies	19	916	147	34	962	128
Drug stores and sundries	5	113	18	8	139	19
Liquor license establishments	9	232	37	9	267	36
Agricultural supplies	2	7	1	19	927	123
Miscellaneous [1]	6	286	46	9	104	14
Total	62	2,535	407	141	4,383	583

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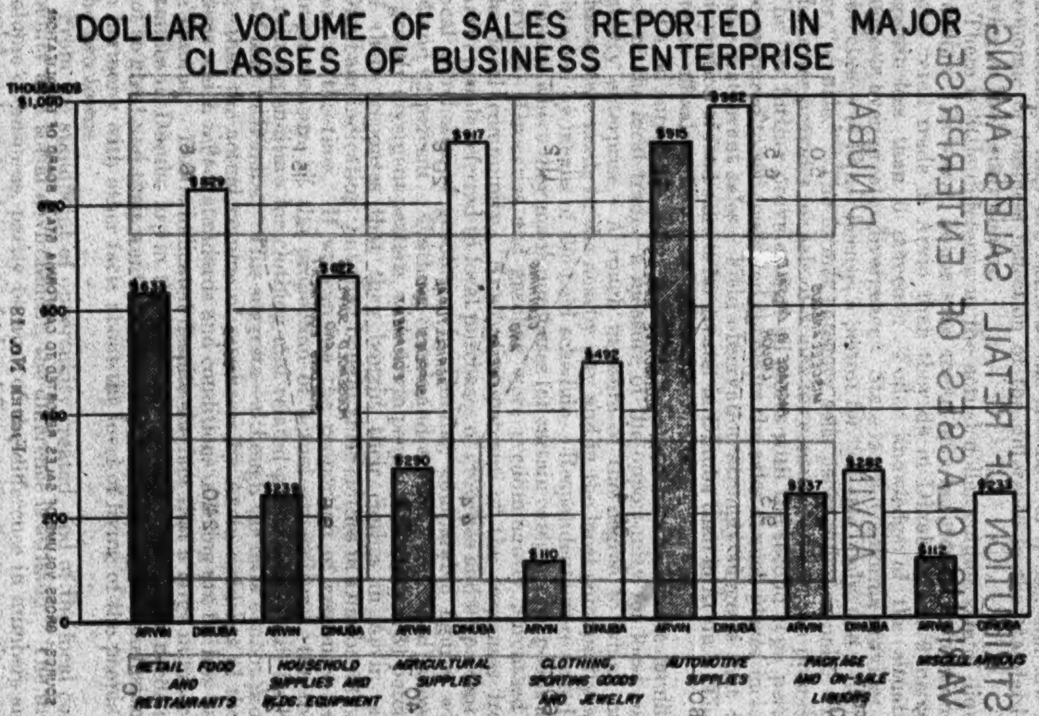
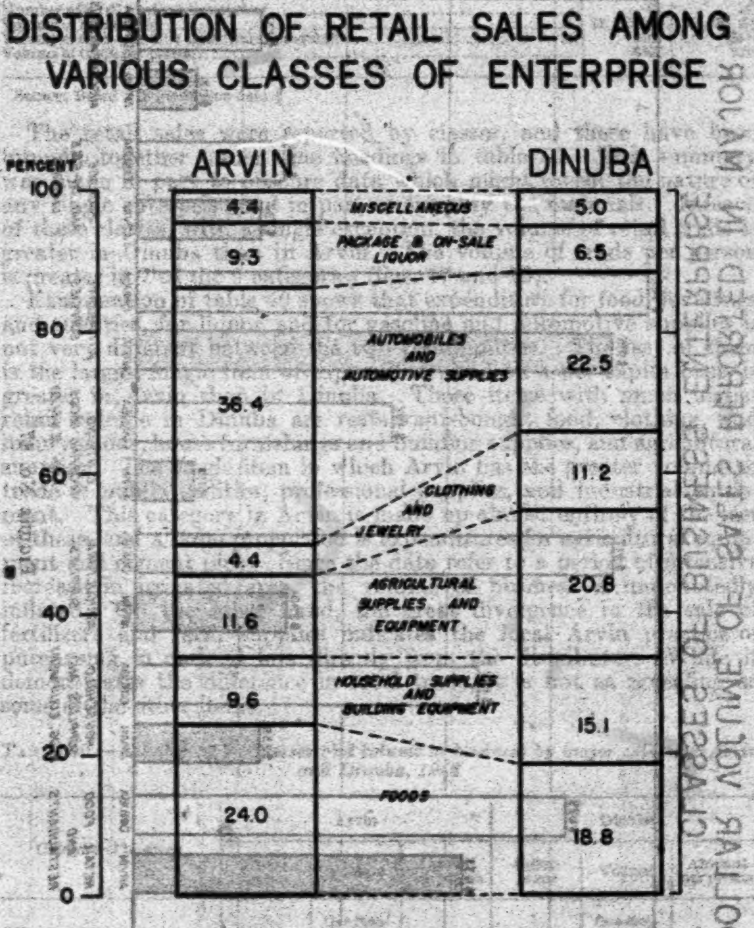
[1] Includes public utilities, professional supplies, and industrial equipment.

Source: Board of Equalization data.



DOLLAR VOLUME OF SALES REPORTED IN MAJOR CLASSES OF BUSINESS ENTERPRISE

Figure No. 17



DISTRIBUTION OF RETAIL SALES AMONG VARIOUS CLASSES OF ENTERPRISE

SOURCE: GROSS VOLUME OF SALES REPORTED TO CALIFORNIA STATE BOARD OF EQUALIZATION.

FIGURE No. 18

Arvin merchants sell fewer clothing and household goods than Dinuba merchants; a difference of nearly 1 to 4 in the former and over 1 to 2 in the latter category. These are the items that are purchased by stable people who are improving their personal condition and their surroundings: they are items in the standard of living, and are the economic or business reflection of the difference in the standard of living as previously shown.

There is little difference in the actual dollar-volume sale of liquor vendors. However, liquor sales make up a far greater proportion of total retail trade in Arvin than they do in Dinuba (over 9 percent against less than 6 percent). Fuller knowledge of the situation suggests even greater divergence. State law in California provides for two classes of liquor license, a permit for "off sale" only, and a permit for "on sale." The former category sells package liquor only, while the latter provides for sale of drinks for consumption on the premises. The law further provides that all stores with the second type permit be prepared to sell food, and therefore the sales at such places include some restaurant sales. Field observation strongly suggests that the proportion of food sales is far greater in Dinuba than in Arvin. There are no off-sale enterprises in Dinuba, but one in Arvin.

To be sure, this is not a budget of expenditures for the families, but of the local trade—a measure of the opportunity for local community enterprise. A rough measure of the degree to which purchases were made in the nearby city and in the local community was obtained by means of the field schedule. Respondents were asked to indicate where they made purchases for certain categories of goods and services. Groceries and gasoline were predominantly purchased in the local community. Ninety-five percent of the responses from Arvin people referred to local purchases of groceries and 91 percent to local purchases of gasoline. In Dinuba, comparable figures were 96 and 92 percent. Clothing (men's and women's combined) showed a greatly divergent pattern, with Arvin people indicating in 31 percent of their responses that they bought their clothes in Arvin, and Dinubans indicating that they bought their clothes in Dinuba 68 percent of the time. If we can use the proportion of responses as a rough measure of the proportion of actual expenditures, the total Arvin expenditure for clothing and related goods would still be but half that in Dinuba. This suggests—although the data cannot prove it—that the actual volume of purchases by Arvin residents of those items which reflect standards and conditions of living are far less than in Dinuba. This is indicated despite the fact that a large number of families in Dinuba are in the older age groups where their needs are not so great and their wants more nearly fulfilled. This conclusion is in harmony with other facts about the level of living of the people in the two towns.

From the standpoint of opportunity created, and of the local community as a social environment, the difference is striking. The total volume of business, partly because of the difference in numbers supported and partly because of the difference in living conditions, is clearly greater in Dinuba than in Arvin. If we eliminate those items which are largely concerned with production itself, namely, agricultural supplies, industrial and transportation supplies, and automotive equipment (heavily influenced by sale of gasoline for power equipment), and leaving out liquor sales which are of a doubtful social value, we have a ratio of nearly 2 to 1 in the purchase of commodities.

SIZE AND TYPE OF BUSINESS ENTERPRISES

With far fewer stores, Arvin merchants have a larger average volume of business—$40,000 worth of business in Arvin against $31,000 business in Dinuba. Table 41 shows the distribution of retail enterprises by size categories of total sales. The distributions do not vary greatly, although the proportion of units under $10,000 total sales is greater in Dinuba, but above that figure is greater in Arvin. If, however, we analyze enterprises by estimated pecuniary strength, according to the Dun & Bradstreet ratings, we find a reversal of this situation. Seventy percent of the Arvin units have a rating of less than $2,000, against 45 percent in Dinuba (table 42). Though there are certain differences in the selection of enterprises in the two sources of data, over 90 percent of the cases refer to the same enterprises. This relationship is shown in figure 19. The bar charts show the high proportion of business enterprises in Arvin which have high gross cash sales and the low proportion which have high capital investments. In Dinuba, on the other hand, the correspondence between sales and capital investments is quite close. One inference from this chart is that the return to the entrepreneur on the basis of investment in the enterprise is higher in Arvin than in Dinuba. From the social point of view, however, an even more important fact emerges from this relationship. The Arvin merchant has a low financial investment in the community, which results in a generally low interest in the affairs and the welfare of the community. This is the statistical corroboration of the statement made by one Arvin merchant who said that the businessman in Arvin does not invest in his enterprise for permanence, but endeavors to make a "killing" and get out. It is also reflected in the generally poorer quality of structures in the business district.

Another key to the nature of the business enterprise is derived from the kinds that are found, and their relative numbers. These data are presented in table 40, and can be summarized here. Enterprises selling food and automobile supplies are the two major kinds in Arvin and together comprise about half of all retail stores. These categories are important in Dinuba, but home-furnishing stores are second to automotive enterprises, and agricultural suppliers third.

Only five units are engaged in selling clothing, household goods, and building materials (9 percent) in Arvin, against 35 such units (25 percent) in Dinuba. On the other hand, the number of liquor sellers is the same in both communities, but percentwise make up a much greater proportion in Arvin than in Dinuba. As already indicated, the liquor sales places apparently do a larger total proportion of their business in the sale of liquor and alcoholic drinks, and less in the sale of food than these stores do in Dinuba.

Table 41.—*Size of business enterprises by volume of retail sales: Arvin and Dinuba*

Size class by volume of annual retail sales	Arvin		Dinuba	
	Number	Percent	Number	Percent
Under $1,000[1]	6	10	21	15
$1,000 to $10,000	15	24	43	30
$10,000 to $50,000	30	48	54	38
$50,000 to $100,000	5	8	11	8
$100,000 to $200,000	5	8	9	6
Over $200,000	1	2	3	2
Total	62	100	141	100

[1] Includes 2 Arvin and 6 Dinuba units without any sales but with records with the Board of Equalization.

Source: Board of Equalization data.

Table 42.—*Size of business enterprises by estimated pecuniary strength: Arvin and Dinuba*

Size class by estimated pecuniary strength	Arvin		Dinuba	
	Number	Percent	Number	Percent
Under $500	16	35	17	15
$500 to $2,000	16	35	35	30
$2,000 to $5,000	5	11	28	24
$5,000 to $20,000	6	13	20	17
$20,000 to $125,000	3	7	12	10
Over $125,000	0	0	5	4
Total[1]	46	100	117	100

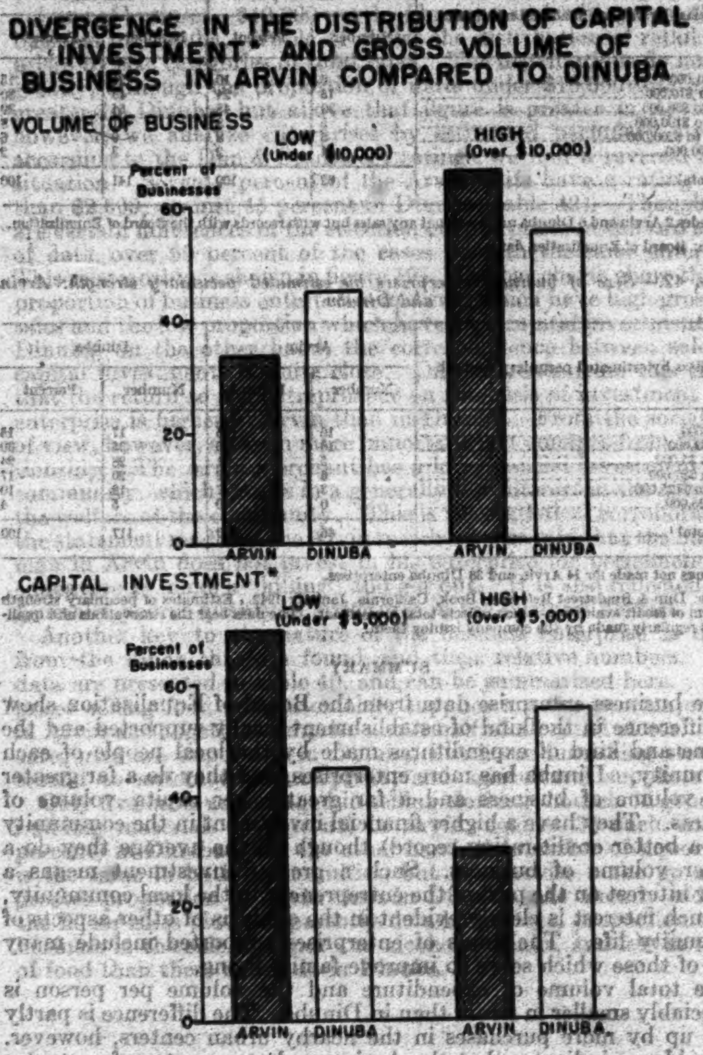
[1] Ratings not made for 14 Arvin and 38 Dinuba enterprises.

Source: Dun & Bradstreet Reference Book, California, January 1942. Estimates of pecuniary strength are a form of credit evaluation which reflects total investment. The data bear the reservations and qualifications regularly made by the company issuing them.

SUMMARY

The business-enterprise data from the Board of Equalization show the difference in the kind of establishment locally supported and the volume and kind of expenditures made by the local people of each community. Dinuba has more enterprises, and they do a far greater total volume of business and a far greater per capita volume of business. They have a higher financial investment in the community (and a better credit-rating record) though on the average they do a smaller volume of business. Such a greater investment means a firmer interest on the part of the entrepreneur in the local community, and such interest is clearly evident in the analysis of other aspects of community life. The kinds of enterprises supported include many more of those which serve to improve family living.

The total volume of expenditure and the volume per person is appreciably smaller in Arvin than in Dinuba. The difference is partly made up by more purchases in the nearby urban centers, however. The evidence indicates that the Arvin purchases are to a far greater extent for such items of doubtful social value as liquor, and less for those items which make for better home living, such as household furnishings. The business enterprise data thus corroborate the evidence obtained from the schedule on level of living. It appears that Arvin purchasing power, buying habits, and tastes are not such as would support many business establishments serving the more basic needs for modern home living.



*The measure of capital investment is the Dun and Bradstreet (Reference Book, 1942) rating of "pecuniary strength", and is subject to the limitations of this data.

FIGURE No. 19

CHAPTER VII

THE CAUSES FOR THE SOCIAL DIFFERENTIATION

THE HYPOTHESIS

The comparative analysis of Arvin and Dinuba, communities of large and small farms, was predicated under the following hypothesis: Within the framework of American tradition, what effect does scale of farm operations have upon the character of the rural community?

Essentially the technique has been to establish the area of similarity and difference between the two towns, assuming that the qualitative differences in social life rest upon fundamental causes in the economy of the communities. Had there been no other differences in the economy, history, or cultural origin of the people of the two towns, then we could simply assert that social differences were a function of scale of operations. Since, however, other possible explanatory causes for the social differentiation between Arvin and Dinuba exist, it is necessary to examine alternative possibilities with care to determine the area of influence that each exerts over the community. Recognition that other factors may be contributory causes does not relieve us from the need to evaluate importance of the various causative forces. This can be done first by determining the degree to which other factors are differentiated between Arvin and Dinuba, second by calling forth other relevant data from neighboring communities, and finally by setting up an explanatory hypothesis which will account for all known difference without either calling upon mystic and undefined causes or doing violence to accepted understanding of human social behavior.

ESSENTIAL CULTURAL SIMILARITIES

The differences between Arvin and Dinuba are differences within a broader framework of similarities. The necessary emphasis upon divergent social characteristics should not obscure this fundamental fact. Both communities belong to a common cultural heritage, so that, strictly speaking, the conclusions can have validity only in terms of that common tradition. They are, as a matter of fact, not so much differences in culture as they are differences in quality. The social conditions which have particularly attracted our attention are between good living conditions and bad, relative degrees of social equality, relative amounts of social homogeneity and participation, relative amounts of social services and of economic opportunity. These are differences on a scale of values, and acceptance of their significance implicitly recognizes that physical comfort, material possessions, social democracy, and economic opportunities are all desirable qualities in a community. Nobody imbued with American culture can cavil with such a scale of values.

The important thing here is that the two communities, therefore, do not have divergent value systems and social customs, but rather that they meet their own values with different degrees of success. If we may be allowed an analogy, the differences between Arvin and Dinuba are like those between two individuals with different degrees of health and vitality rather than like the differences between two individuals of divergent racial characteristics.

Essentially, Arvin and Dinuba are part of a common system of agricultural production, best understood as industrialized. Both also partake of a single culture pattern which, in turn, can best be described as urbanized.

By industrialized farming is meant the system of producing crops intensively, solely for the cash market, with a high degree of farm specialization, utilizing great quantities of capital and requiring a large input of labor hired on an impersonal basis. Large-scale operations tend to intensify these qualities, but the pattern is not dependent upon large units. It seems probable, however, that the existence of large-scale—particularly of corporate—operations within the broader area and with which the small farmer must compete is an essential element in developing the industrial pattern.

The urbanized culture pattern that results clearly reflects the social behavior of the cities and follows from the industrial nature of farm production. Its primary characteristic is the general acceptance of pecuniary standards of value and a social status system based upon money wealth. Such a set of values inevitably leads to a more or less closed class system based upon economic status, and expressed to the individual largely in terms of occupation. These features are common to Arvin and Dinuba, though the degree of social segregation and the social distance between occupational classes are markedly different. Urbanized culture has further effects. As a result of class stratification, and because of the complexity of society, there is a tendency toward developing social action in terms of special interests rather than on a community-wide basis. For that reason associations of like-minded persons tend to play a very important part in the functioning of the community. While specific differences have been noted, here again we get a common fundamental pattern. This aspect of urban culture is reflected in the specialization of the activities and interests of the individual—the tendency to be concerned with a single and very partial role in the total functioning of the economy. The farmer has traditionally held out against this aspect of the industrialization of the world. The farmer as jack-of-all-trades is the accepted American picture. Yet in the economy of agricultural production in the irrigated areas of California, the farm operator, like his city-dwelling cousin, has become specialized in his operations. The 40-acre farmer as well as the operator of 4,000 acres will show such specialization, though obviously there will remain considerable difference in degree.

It is against a background of such common cultural characteristics that the divergence between Arvin and Dinuba must be examined.

RECAPITULATION OF SOCIAL DIFFERENCES

Within the framework of cultural similarity, the differences between Arvin and Dinuba take a clearer meaning. The picture in Arvin may be contrasted with the Dinuba situation in the following way:

1. The greater number of persons dependent upon wages rather than upon entrepreneureal profit.

2. The lower general living conditions as measured by a level-of-living scale and the subjective evaluation of households.

3. The lower degree of stability of population.

4. The poorer physical appearance and condition of houses, streets, and public buildings.

5. The relative poverty of social services performed by the community.

6. The poorer schools, parks, and facilities offered youth.

7. The relative dearth of social organizations serving the individuals in the community and the community as a whole.

8. The fewer religious institutions.

9. The lesser degree of community loyalty expressed.

10. The apparently fewer decisions on community affairs made by the local community and the apparently smaller proportion of the population participating in such decisions.

11. The apparently greater degree of social segregation and greater social distance between the several groups in the community. (This and the preceding items have been labeled apparent because neither is amenable to statistical evaluation, though considerable evidence is at hand to indicate their existence.)

12. The lesser amount of retail trade, the fewer business establishments, and the low volume of trade in those classes of merchandise most generally accorded a high place in social values.

This constitutes a rather imposing list of social and economic factors, reflecting the quality of the society in the two communities, in which the one fulfills rather well our normal expectations of social life and the other consistently fulfills them less satisfactorily. The number of items and the consistency in their implications can hardly rest on purely fortuitous grounds.

POSSIBLE CAUSATIVE DIFFERENTIALS

However, as already indicated, other differences between Arvin and Dinuba than the scale of farm operations might be invoked as the cause for the qualitative differential between Arvin and Dinuba. While many of these differences are functionally interrelated, a listing of them under major headings will serve to clarify their importance. Obviously they are not all of like importance—some clearly are secondary reflections of more fundamental factors while others would appear to throw the advantage in the wrong direction. Differences in physical environment, cultural and demographic features, community history, agricultural production, and farm organization are listed.

	Arvin	Dinuba
I. Environmental factors:		
1. Land:		
(a) Area served	64,000 acres	42,000 acres.
(b) Land in farms	46,000 acres	36,000 acres.
(c) Intensive uses	38,000 acres	34,000 acres.
(d) Land of soil classes 1 to 3	50,000 acres	31,000 acres.
2. Water:		
(a) Source	Pumped	Surface supplemented with pumps.
(b) Cost	$6.93 per acre	$4 per acre.

	Arvin	Dinuba
I. Environmental factors—Continued		
3. Other resources:		
(a) Minerals	Oil leases, general	None.
(b) Recreation	Little or none	Little or none.
II. Cultural and demographic factors:		
1. Population of community	6,200	7,400.
2. Cultural origins:		
(a) Native Americans	33 percent	61 percent.
(b) Native Californians	4 percent	17 percent.
(c) Dust Bowl migrants	63 percent	22 percent.
(d) Median length of residence	Less than 5 years	15 to 20 years.
3. Educational attainment (average for family heads).	7.0 years	8.4 years.
4. Economic status:		
(a) Median income bracket	$1,751 to $2,250	$1,751 to $2,250.
(b) Wage labor as proportion of family heads	81 percent	49 percent.
III. Historic factors:		
1. Age of community (as of 1944)	31 years	56 years.
2. Decade of major growth	1930-40	1910-20.
IV. Agricultural production factors:		
1. Value of production (1940)	$2,425,000	$2,540,000.
2. Type of farming:		
(a) Proportion irrigated land in orchard and vineyard.	36 percent	63 percent.
(b) Proportion in row crops	41 percent	11 percent.
(c) Proportion in cotton	20 percent	7 percent.
(d) Proportion of farms in fruit	35 percent	76 percent.
(e) Proportion of farms in field crops	46 percent	17 percent.
V. Farm organization factors:		
1. Tenure:		
(a) Tenancy	42 percent	14 percent.
(b) Absentee ownership	35 percent	16 percent.
2. Labor requirements:		
(a) Man-hours of labor required	3.6 million	3.5 million.
(b) Requirement for hired labor	3.3 million	1.4 million.
(c) Minimum labor requirement as percent of maximum.	25 percent	20 percent.
(d) Maximum outside seasonal workers required.	1,171	1,086.
3. Size of farm operations:		
(a) Number of farms over 160 acres	46 percent	6 percent.
(b) Acreage in farms over 160 acres	91 percent	25 percent.
(c) Average farm size	497 acres	57 acres.
(d) Average value of production	$18,000	$2,400.

Under these five headings are included 14 separate items, some with great differences, such as farm size and age of community; some with large differences, such as tenancy and major crops; some with practically no difference, such as intensive land use and value of production; and a few where the advantage would appear to lie with Arvin, such as available good land, other resources, and seasonality of employment. We shall discuss them seriatim.

ENVIRONMENTAL FACTORS

Factors in the environment are more impressive for their similarities than their divergences. The relationship of the community to neighboring towns and cities and to their markets, the availability of minerals, and the potential productivity of the land are all closely similar but somewhat favorable to Arvin. The only factor of the environment which is markedly divergent is the water resources. The question of environment, therefore, devolves upon the influence of this factor upon community life. This in turn must be separated into the influence of water resources on the size of farms on one hand and directly upon community organization on the other.

The discussion on relative cost of water showed that in Arvin the investment per farm was extremely high and because of depth of pumping, reasonably large acreages could be handled by single wells.

In Dinuba, on the other hand, original cost was lower and during initial development no pump was required, though for full use of the land, investment had eventually to be made in pumps. On the other hand, given the size of farms as they exist in each community, the actual per-acre cost of water is not greatly different. As a matter of fact, the excess of cost of water in Arvin is less than the amount received by landowners for oil leases, so that any economic hardship directly resulting from water costs would be offset by gains from potential oil resources. Furthermore, both the costs and the gains are generally reflected in land values, and it is therefore doubtful if either has a long-run effect upon the returns to the farm operator.

The situation with respect to water has, however, had an effect upon size of farms in the Arvin area. The requirement for deep and expensive wells with large water flow has made it necessary to irrigate fairly large tracts with each pump—about 200 acres for efficient operation. Many farms in the Arvin area get water from wells owned either cooperatively or corporately, so that it is possible, even with this water situation, to operate small units efficiently; furthermore, most of the land is in units which are larger than the water requirements of single wells, and therefore farm size is not clearly dependent upon the need for deep wells. Nevertheless, this high initial investment has inhibited the development of small units and contrariwise been influential in the creation of larger ones. Furthermore, the depth to groundwater held up the intensive use of Arvin lands till efficient pumping plants were developed by engineers, so that the water situation was responsible for the late growth of Arvin. Summarizing, the water supply has had little or no effect upon the economic welfare of operating farmers that could create social poverty, but it has had some influence upon the size of farm units and upon the period of development of Arvin lands.

The availability of surface water in the Dinuba district and the relatively simple engineering and low investment in water resources made it possible to develop that area early. Establishment of an irrigation district under the original Wright Act made it advantageous to subdivide and sell the land. Thus the Dinuba water supply was a responsible agent in establishing farm size in that community.

CULTURAL AND DEMOGRAPHIC FACTORS

Several factors in the social background of the people who dwell in Arvin and Dinuba require careful examination: size of population, nativity of population, educational attainments, and economic status.

Dinuba is roughly 20 percent larger in population than Arvin. Since the resource base is comparable, this divergence must be attributed in part to intensity of land use and in part to size of farm operations and degree of mechanization. Since approximately identical amounts of outside labor are brought into the community, migration of workers can hardly be held responsible. It would be difficult to explain differences in average level of living by the existence of fewer families, when these fewer families enjoy the same amount of natural resources. Since, however, the number of people are partially responsible for the existence of social agencies, such differences might be attributable to community size. While the population differences between the two communities may be contributing causes to the social differences, the towns are too nearly the same to account entirely for the difference of 2 to 1 or more in business establishments, clubs, churches, and community facilities.

The cultural background differs as follows: More Arvin residents are native American, but far fewer are native Californian; most Arvin residents come from the Dust Bowl states while the people of Dinuba represent a wide and even scatter of state origins; and finally the duration of residence of Arvin and Dinuba persons is greatly at variance.

The differences are most difficult to assess. It would be hazardous to suggest that the people from any one area have greater cultural or physical capability for creating a social environment more in keeping with American tradition than people from some other section of the Nation. Local opinion is frequently derogatory of people from the Dust Bowl states, using the epithet "Okie" in referring to them and according them poor social standing. But upon closer questioning and examination, these references and social evaluations appear to be not actually directed at their place of origin but at their economic status and level of living. Cultural differences are recognized, of course. Religious behavior and beliefs stand out among such differences, but also manner of dress, colloquial expressions, and conceptions of morality show regional differentiation in America. But the differences between Arvin and Dinuba were not differences in culture but differences in the successful fulfillment of a common cultural tradition. Three fundamental reasons therefore appear which make it impossible to accord direct causative force to place of origin (keeping in mind always that we are not dealing with economic circumstances.) First, the difficulty of assessing cultural differences to separate states or regions in the United States. It would be impossible to assert that the people in the Texas-Arkansas-Oklahoma area either have social values which are universally poorer than those of the remainder of the United States or that they are socially or physically incapable of achieving such values. Second, the behavior patterns that are differentiable between people from that region—either differences in culture or in economic status—are rapidly sloughed and efforts are made to conform to dominant patterns. Older residents generally recognize that the faults found among "Okies" in their personal habits were changed "as soon as they learned better."

The religious beliefs brought by immigrants from the Dust Bowl is predominantly fundamentalist, and is a cultural characteristic which sets them off from older California residents. Yet a study made of this aspect of migrant workers' behavior shows that they readily take on the religious expressions of the older residents when resettling in California communities.[illegible] There is evidence that the changes both in personal habits and religion follow from changes in economic conditions as much as or more than from cultural assimilation and education.

Third, while Arvin has a higher proportion of Dust Bowl migrants than Dinuba (66 percent as against 30), this is merely a reflection of the different occupation structures in the two towns. This can be shown, for laborers are predominantly from that area (80 percent in Arvin and 60 percent in Dinuba) whereas they make up relatively unimportant proportions of the independently employed category (40

[illegible] Walter R. Goldschmidt, Class Denominationalism in California Rural Churches, op. cit.

and 24 percent from Arvin and Dinuba, respectively). Thus the preponderance of persons from the Dust Bowl states in Arvin results from the fact of large farms and the labor requirements. Furthermore, the group who are in a position of leadership in the community and who therefore can set the standards of its activities are not from this region.

Dinuba family heads have had nearly 1 year of schooling more than those of Arvin. This difference again is largely a result of the fact that farm labor has lower educational attainments than the remainder of the population. We find, for instance, that the average education of farm laborers in Arvin is 6.5 and of Dinuba 6.6 years, while that of farmers and white-collar workers is 9.5 and 9.8 years for Arvin and Dinuba, respectively. It can therefore be said that the difference in level of education of eight-tenths of a year is mostly the result of the difference in economic composition of the population. The difference in level attained among that group which offers leadership in community affairs is three-tenths of a year. Modal education for all groups is 8 years with a second and lower peak at 12 years. That educational attainment (as an index of personal capacity) could affect the quality of community life is an acceptable hypothesis, but the significance of this feature is diminished by the low observed differences not directly associated with economic status.

Arvin residents had but a short time in the community at the time of study, as compared with Dinuba residents. This in part is a function of the age of the two towns. However, a heavy turn-over in population is indicated by the fact that fewer than half of Arvin's residents had lived there in 1940 though by that time the community had achieved its present size.

That this turn-over is largely but not entirely a function of economic status can be shown by the device used for educational attainment and state of origin. If the farm labor group is singled out, 31 percent of the Arvin group and 27 percent of the Dinuba group came during the years 1943 and 1944 (prior to field work). The proportions are 61 percent and 47 percent for Arvin and Dinuba, respectively, when we consider all those who came in 1940 or later. Among farmers and white-collar workers, 37 percent and 15 percent, respectively, came in 1940 or later.

There is no doubt that community loyalty, positions of leadership, and the creation of social institutions are affected by length of residence, and that the recency of Arvin's development (which will be discussed below) and the turn-over in population have had an effect upon the social character of the communities. It is important to realize, however, that such turn-over is in part a function of economic and social conditions. Repeated statements by persons in all walks of life that they did not plan to remain in Arvin because of the inadequate facilities offer the best substantiation of this effect. Thus a vicious cycle is created which finds its origin in the fact that but a small portion of the community has a vested interest in it sufficient to create a sense of stability.

The foregoing has shown that each of the demographic differences is largely, but not wholly, a function of the occupational structure of the two communities. When residence, origin, and education are analyzed by occupation groups, half or more of the differential disappears. Furthermore, the influence of the economic conditions upon these factors goes beyond the simple change in percentage in some of these effects. These differences, whatever their origin, are certainly causes contributory to the relative social conditions in the two towns.

In Arvin 8 out of 10 families depend upon wages for their livelihood. In Dinuba 5 out of 10 are wage earners. These workers, especially those who are agricultural workers, have little economic or social investment in the community. Furthermore, they do not supply the leadership for social activities, which almost without exception comes from farmers and white-collar workers. The fact, therefore, that in one community there are approximately 1,000 families which make up the category from which such leadership normally arises, while in the other only about 250 families are in that position, is extremely important. It influences other demographic factors as well as the development of social institutions. This differential is, in turn, very largely a direct result of farm size—a simple arithmetical certainty. For the number of farmers that can be supported by a given resource base is a direct function of the amount of resources each one controls. The influence of size of farm on size of the merchant and other white-collar categories is less direct, but there is good reason to believe that such influence exists, as will be developed below.

HISTORIC FACTORS

There are two pertinent facts about the history of the two communities which have an influence upon the character of their social institutions. These are: (*a*) The relative age of the two towns, and (*b*) the different epochs or periods in which they came into being. Each deserves careful analysis.

It is difficult to say what point in time represents the beginning of a community. In Dinuba the year 1888 is generally accepted. It was in this year that the Alta Irrigation District was formed, that the post office was created, and the town officially inaugurated. Irrigation development had been coming in under a private corporation for 6 years. The following year a school was established at Dinuba, though schools had existed in the area nearly 10 years previously. A comparable date in Arvin is also hard to establish. Schools existed within the area in 1902, but none was created in Arvin proper till 1914. The earliest continuous settlement in this area based upon irrigation took place in 1910. The date should, therefore, be set between 1910 and 1914. Nineteen hundred thirteen, the year prior to the establishment of the Arvin school, is most comparable to that of 1888 for Dinuba and places the two towns just 25 years apart in point of origin.

The rate of growth in the two towns was nearly identical, though somewhat faster in Arvin than Dinuba, and the absolute figures are nearly the same. The Arvin figures are somewhat inflated, since one school was included which gets half or more of its pupils from outside the area of the community as delineated, while school lines and community lines in Dinuba are in close agreement. This accounts for the fact that the 1942 Arvin school attendance figure appears to be greater than Dinuba's on this graph (fig. 20), while schedule data showed Dinuba's population to be about 20 percent greater in 1944. This inflation is probably about 20 percent, but the effect of this on the rate and timing of the growth of these towns is not significant.

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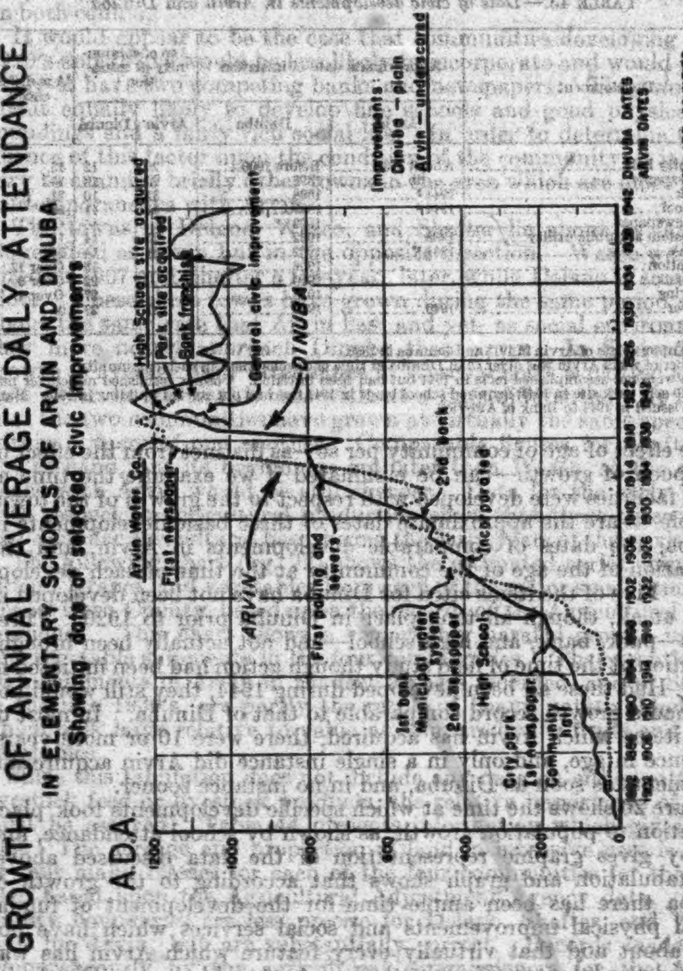
[8] Walter R. Goldschmidt, Class Denominationalism in Rural California Churches, op. cit.

Furthermore, the community in which these outside students fall offers fewer economic and social services than Arvin. Growth curves of the average daily attendance of the schools located in the towns of Arvin and Dinuba (leaving out schools in rural areas) show the same pattern as the curves presented here.


GROWTH OF ANNUAL AVERAGE DAILY ATTENDANCE IN ELEMENTARY SCHOOLS OF ARVIN AND DINUBA

Showing date of selected civic improvements

SOURCE RECORDS IN THE OFFICE OF THE COUNTY SUPERINTENDENT OF SCHOOLS OF KERN AND TULARE COUNTIES

FIGURE No. 20

Dinuba there has been ample time for the development of fundamental physical improvements and social services which have come about and that virtually every feature which Arvin has was obtained at a later stage in growth than comparable ones in Dinuba.

The second aspect of this historical difference is the differing epochs or periods during which the community came into being as a community. This can be rephrased as follows: What difference in the character of the years preceding the First World War might create a community of a kind which could not come into being before the Second World War? On theoretical grounds it would be assumed that

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TABLE 43.—*Date of civic developments in Arvin and Dinuba*

Development	Approximate date of initiation		Age of community at initiation [1]		Age difference [2]
	Arvin	Dinuba	Arvin	Dinuba	
Community hall	About 1938	Before 1900	25	12	13.
First newspaper	do	1898	25	10	15.
City park	1944 [3]	1898	31	10	21.
High school	1944 [3]	1899	31	11	20.
Second newspaper		1902		14	Over 17.
Water system as public utility	1938	1902	25	14	11.
First bank	1944 [3]	1902	31	14	17.
Incorporation		1906		18	Over 13.
Second bank		1910		22	Over 9.
First paving		1915		27	Over 4.
First sewer	1940	1915	27	27	0.

[1] Based upon origin of Arvin in 1913 and Dinuba in 1888.

[2] Number of years Arvin was older than Dinuba at time of development in each community.

[3] These were not accomplished facts in 1944 but had been initiated. County published notices for purchase of 10-acre park site in 1944; acquired school lands in 1941 but had not started building in 1944. Bank franchise issued in 1944 to Bank of America.

The effect of age of community per se—as distinct from the effect of the epoch of growth—can be eliminated if we examine the time at which facilities were developed with respect to the growth of the town. In table 43 are the approximate dates of these basic developments in Dinuba, the dates of comparable developments in Arvin, and the calculation of the age of the community at the time of each development. Five of the items cited for Dinuba have not been developed in Arvin at all, though all took place in Dinuba prior to 1920. Three others—park, bank, and high school—had not actually been brought to fruition at the time of field study though action had been initiated in each. Had these all been developed during 1944, they still would not have had a growth record comparable to that of Dinuba. In most of those items which Arvin has acquired, there were 10 or more years' difference in age, and only in a single instance did Arvin acquire improvements as soon as Dinuba, and in no instance sooner.

Figure 20 shows the time at which specific developments took place in relation to population growth, as shown by school attendance, and thereby gives graphic representation of the data discussed above. This tabulation and graph shows that according to the growth of Dinuba there has been ample time for the development of fundamental physical improvements and social services which have not come about and that virtually every feature which Arvin has was obtained at a later stage in growth than comparable ones in Dinuba.

The second aspect of this historical difference is the differing epochs or periods during which the community came into being as a community. This can be rephrased as follows: What difference in the character of the years preceding the First World War might create a community of a kind which could not come into being before the Second World War? On theoretical grounds it would be assumed that the years of the 1920's and 1930's would be years in which physical development would take place more rapidly than they had earlier, while the social institutions would develop less rapidly. Advanced technology would lead us to expect the former, while the universal use of the automobile and the resulting greater mobility of rural people would make us expect the latter. Arvin, however, is behind on both counts.

It would appear to be the case that communities developing in the 1920's and 1930's would be less likely to incorporate and would be less likely to have two competing banks and newspapers. They would be about equally likely to develop fine schools and good physical surroundings and a fairly rich social life. In order to determine the influence of this factor upon the condition of the community, it is necessary to examine briefly other towns in the area which are more nearly contemporaneous with Arvin.

The towns of Delano, Wasco, and Shafter lie about as far from Bakersfield as Arvin but in the opposite direction. Wasco was colonized in 1907 and Shafter a few years later, while Delano is somewhat older. These three towns have grown during the same period and at about the same rate that Arvin has; and yet, as social environments, they more nearly approach Dinuba than Arvin. In figure 21 the growth in average daily attendance in Wasco schools is plotted against that of Arvin but in this case without a time differential. It is seen that the two communities have grown at virtually the same speed and within 5 years of one another. Comparable figures for Shafter are not at hand, but its beginnings are later than Wasco, so the coincidence with Arvin would be still sharper. Data for the early 1920's with respect to agricultural production show that these three towns had a similar agricultural base during the early years of their existence.

The following chart (fig. 22) shows the estimated carlot shipments of fruit, grapes, and vegetables from each of the major small communities in Kern County, based upon the records of the Agricultural Commissioner. This chart shows a remarkably parallel growth in fruit and vegetable shipments in the four communities. The exceptionally high shipments in Arvin in the last 2 years recorded, and of Shafter in the late 1930's, are partly the result of heavy potato shipments, which bulk large relative to value as compared with fruits and other vegetables.

Since this tabulation does not include any data on either cotton or livestock feed or livestock products, the relative importance of these must be assayed. Table 44 presents information which gives us a clue. The acreage and proportion of land in intensive uses is given by four major classes for each of the four communities for the year 1940 based upon the Agricultural Adjustment Agency data. Community boundaries are less precise for Delano, Shafter, and Wasco than for Arvin, but are substantially correct. Records made contemporaneously by the agricultural commissioners for the Arvin-Weedpatch-Lamont area in 1931 and 1932 are also presented. The total area covered is about twice as large as the Arvin area used for the 1940 data.

The volume of shipment shown in figure 22 reflects the acreage in the first two categories presented in table 44. It is seen that these categories combined form very nearly the same proportion of total intensive acreage in each community, varying from 43.6 percent in

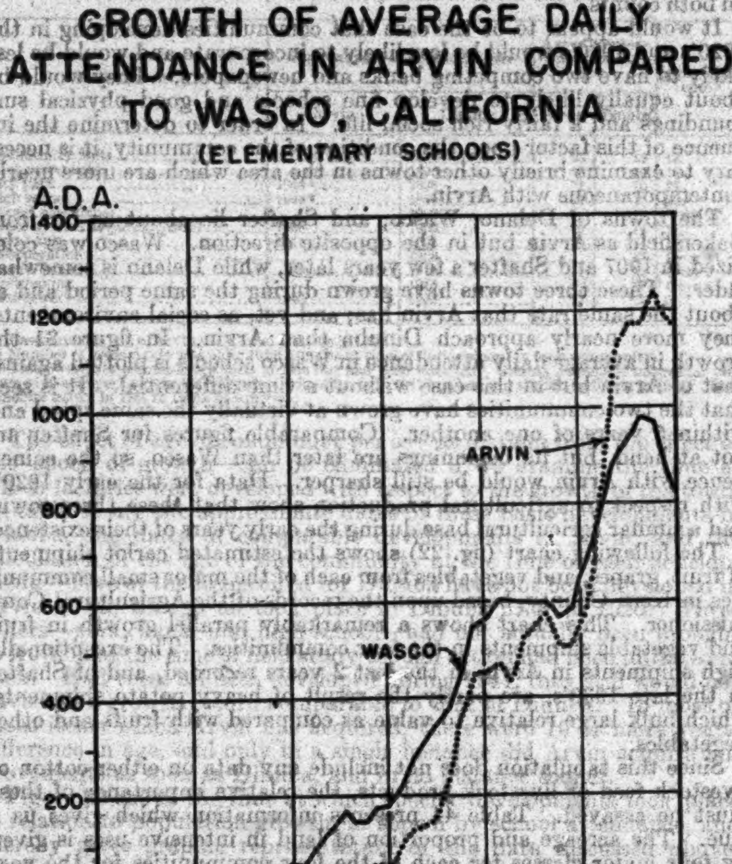

FIGURE No. 21

the years of the 1920's and 1930's would be years in which physical development would take place more rapidly than they had earlier, while the social institutions would develop less rapidly. Advanced technology would lead us to expect the former, while the universal use of the automobile and the resulting greater mobility of rural people would make us expect the latter. Arvin, however, is behind on both [illegible]

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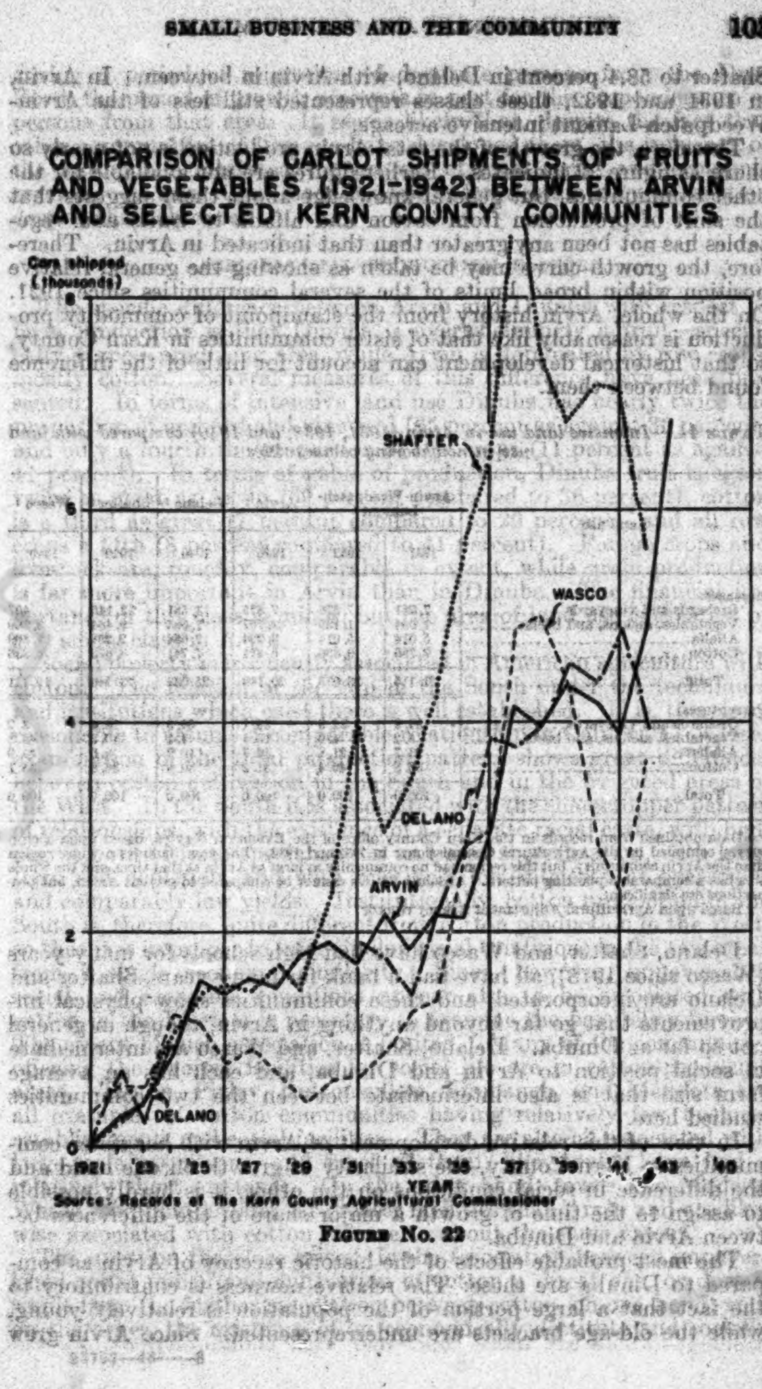
COMPARISON OF CARLOT SHIPMENTS OF FRUITS AND VEGETABLES (1921-1942) BETWEEN ARVIN AND SELECTED KERN COUNTY COMMUNITIES



Source: Records of the Kern County Agricultural Commissioner

FIGURE No. 22

Shafter to 58.4 percent in Delano, with Arvin in between. In Arvin, in 1931 and 1932, these classes represented still less of the Arvin-Weedpatch-Lamont intensive acreage.

Therefore, the growth of the total Arvin production is not nearly so sharp as figure 22 indicates. Earlier figures are not available for the other communities, but general knowledge about them suggests that the shift of production from cotton and alfalfa to fruits and vegetables has not been any greater than that indicated in Arvin. Therefore, the growth curve may be taken as showing the general relative position within broad limits of the several communities since 1921. On the whole, Arvin history from the standpoint of commodity production is reasonably like that of sister communities in Kern County, so that historical development can account for little of the difference found between them.

TABLE 44.—*Intensive land use in Arvin (1931, 1932, and 1940) compared with land use in neighboring communities*

Land use	Arvin-Weedpatch-Lamont [1]		Arvin [2]	Delano [2]	Shafter [2]	Wasco [2]
	1931	1932	1940	1940	1940	1940
Acreages:						
Orchards and vineyards	7,251	7,576	7,875	13,581	3,146	407
Vegetables, melons, and beets	1,094	1,139	2,707	1,033	9,464	5,569
Alfalfa	5,014	5,014	3,284	2,684	2,258	1,899
Cotton	7,756	9,306	6,274	7,741	8,672	4,836
Total	21,115	23,035	20,140	25,039	23,540	12,711
Percentages:						
Orchards and vineyards	34.3	32.9	39.1	54.3	13.4	3.2
Vegetables, melons, and beets	5.2	4.9	13.4	4.1	40.2	43.8
Alfalfa	23.7	21.8	16.3	10.7	9.6	14.9
Cotton	36.8	40.4	31.2	30.9	36.8	38.1
Total	100.0	100.0	100.0	100.0	100.0	100.0

[1] Data obtained from records in the Kern County office of the Extension Service, based upon a crop survey compiled by the Agricultural Commissioner in 1931 and 1932. The area includes a wider region than the Arvin community, but this region had no community as large as Arvin at that time, and the whole area has a comparable planting pattern. Absolute figures cannot be compared to present Arvin, but proportions are significant.

[2] Based upon Agricultural Adjustment Agency records.

Delano, Shafter, and Wasco have had high schools for many years (Wasco since 1918), all have had a bank for many years, Shafter and Delano are incorporated, and these communities show physical improvements that go far beyond anything in Arvin, though in general not so far as Dinuba. Delano, Shafter, and Wasco are intermediate in social position to Arvin and Dinuba, and each has an average farm size that is also intermediate between the two communities studied here.

In view of this relative development of Arvin with her sister communities in Kern County, the similarity of growth on one hand and the difference in social conditions on the other, it is hardly possible to assign to the time of growth a major share of the differences between Arvin and Dinuba.

The most probable effects of the historic recency of Arvin as compared to Dinuba are these: The relative newness is contributory to the fact that a large portion of the population is relatively young, while the old-age brackets are underrepresented. Since Arvin grew during a period of migration of destitute persons from the Dust Bowl, the period of growth accounts in part for the preponderance of persons from that area. It seems likely that, despite the fact that other communities of like age have developed them, the influence of the automobile inhibited the growth of local social and economic services. At least it has made it possible for a community to function despite their absence.

AGRICULTURAL PRODUCTION FACTORS

The specific difference between Arvin and Dinuba with respect to farm production is that Dinuba is overwhelmingly a fruit—specifically grape—producing area, while Arvin is dominated by row crops, mostly cotton. Several measures of this difference have been presented. In terms of intensive land use Dinuba has nearly twice the proportion of orchard and vineyard (65 percent as against 33 percent) and only a fourth the proportion of row crops (11 percent as against 41 percent). In terms of value of production, Dinuba fruit is again twice as great as Arvin (69 percent compared to 36 percent), cotton is a third as great (7 percent compared to 20 percent), and all row crops a fifth (8 percent compared to 41 percent). Forage crops and livestock are, roughly, comparable in extent, while grain production is far more important in Arvin than in Dinuba. The financial importance of this class is minor, but the area of land use is greatest of any single class in Arvin.

Social poverty is frequently associated in American agriculture with cotton. The relation of the two in the South under the techniques and institutions which exist there is well established. It is, therefore, reasonable to assume a comparable relationship in California. Closer examination of the total production pattern shows great differences between cotton cultivation in the South and in the irrigated areas of the West. In the South it is associated with the sharecropper pattern of relationships, with the existence of a separate racial caste, with high degree both of farm specialization and area specialization, with long-term soil depletion, and with relatively low intensity of operations and comparably low yields. Institutionally, cotton production in the South is, therefore, quite different from cotton production in the West, so that it is improper to infer similar social conditions in the two areas from a single economic similarity. Since, however, impoverished social and economic conditions appear also to be associated with cotton in the West, it is necessary to examine the possibility further. The extent of such association is limited. Many of the communities offering the poorest facilities for social life are in cotton-producing areas. Tipton, Pixley, Buttonwillow, Firebaugh, and Mendota are all examples of cotton communities having relatively few business establishments and social facilities. They are also all associated with large-scale operations, and most of them, like Arvin, have had a relatively short existence. On the other hand, towns like Madera, Wasco, and Shafter offer far greater facilities than Arvin and are likewise associated with cotton culture to about the same extent.

The question therefore arises: Is the association between impoverished social milieu and cultivation of cotton a direct one, or does it result from the further association between cotton, on one hand, and, on the other, the existence of an economically destitute and socially impoverished labor class and/or the speculative cash production of the enterprise? Formulated this way, the question permits of but one answer—the latter. Yet this raises a real problem, if cotton per se is to be explanatory. The detailed analysis of farm production shows that both communities engage in production for the cash market and, furthermore, that the amount of labor required is higher in the grape-producing area of Dinuba than in the more diversified Arvin community. Requirements for labor are, therefore, not the differentiating factor and cannot explain the divergence between Arvin and Dinuba.

One other possibility presents itself, namely, that labor attracted to the cotton fields is measurably different from labor working in fruit-producing areas. We have seen that the laborers in Arvin are somewhat below those of Dinuba in educational attainments and that more of them come from the poorer states. It does not seem improbable that Arvin laborers are, on the average, persons with fewer cultural attainments and fewer advantages of background, though only within a very limited range. It is noteworthy that laboring groups in both communities receive median incomes in the same bracket but that the specific median (estimated) would be slightly lower in Arvin than in Dinuba. The effect of such differences would necessarily be slight. First, because the observable differences are very small. These differences could be accounted for by the fact that the social environment, as distinct from the character of economic opportunity, repels the workers whose capabilities are higher. Second, because labor in both categories is generally interchangeable; i. e., that farm laborers move from fruit to cotton to potatoes seasonally as a regular thing. Third, because the social milieu of the California community quite clearly is created by the nonfarm labor population—the farmers and white-collar workers. It would, therefore, be impossible to claim that measurable differences in social and economic facilities are the result of fundamental differences in the characteristics of that element of the population which in neither community offers the leadership in creating such facilities.

Cultivation of cotton and other "row" crops, especially potatoes, may be partially responsible for the large operations in Arvin. Insofar as this is the case, the type of production is responsible for the proportions of farmers and farm laborers. However, the proportion of row-crop farms in the lower size categories is almost as great as the proportion of fruit operations, and some of the largest units are devoted chiefly to fruit production. Like the water situation, the kind of crops grown is therefore partially responsible for the size of farm pattern in Arvin.

FARM ORGANIZATION FACTORS

Three aspects of farm organization attract our attention as possible causative factors in determining the differences that exist between Arvin and Dinuba: tenure pattern, labor requirements, and size of farm operations.

Arvin has a high proportion of tenants whereas Dinuba has far fewer. Likewise, the proportion of absentee owners in Arvin—here defined as owners reported living outside the county—is over twice that in Dinuba. In general, it is expected that owner-operators and resident-owners are more concerned with community welfare and social services than are tenants and absentee owners. While nothing in the present study either corroborates or refutes this, it may generally be accepted as a working hypothesis.

It is therefore accepted that in some measure the relative social poverty rests upon tenure pattern. This difference in tenure pattern is partially the result of historic timing and outside social forces. It is also in considerable measure a function of scale of farm operations and social poverty. Table 12 (ch. III) shows that tenancy is more frequent on large farms, over 160 acres, than on small farms. It has also been shown that the general social conditions in Arvin have caused some owner-operators and other natural leaders to leave the community. How influential these forces are in creating the tenure pattern of Arvin cannot be assessed, but certainly they are not wholly negligible.

The second aspect of farm organization is the labor requirements of operation. This has been touched upon in the discussion of occupation structure. At that point, we saw that occupation structure is a very important aspect of the difference between the two communities. The question therefore arises as to whether differences in labor requirements on farms in the two communities create that differential in occupation structure. The answer is an unqualified no. For the production of commodities in Arvin requires just under 3 million man-hours of labor while the Dinuba production, reaching the same gross value, requires 3½ million man-hours of work. That the labor structure is a function of scale of operations becomes clear when we examine item (*b*) under this heading in the list appearing earlier in this chapter. Only a small fraction of Arvin labor is absorbed by farm operators while in Dinuba three-fifths of the work can be performed by farm operators.

It is generally accepted that seasonality of employment creates poor social conditions. Both Arvin and Dinuba have such an uneven demand for labor that severe hardships can be expected in normal times. Dinuba employment opportunities, because of the intensive devotion to grape production, fluctuate more than those of Arvin. An examination of figure 6 shows that Arvin regular workers can be fully employed locally for 6 months in the year, whereas Dinuba regular workers can be so employed only 4 months. The labor picture appears to be better in Arvin than in Dinuba.

It might be assumed, however, that Dinuba labor tends to be performed by outsiders to a greater extent than Arvin labor does. Under such an assumption the poverty and poor social conditions which surround wage workers would not appear in Dinuba but would merely show up in other towns where these workers are resident. Such a factor would not affect the availability of social institutions and facilities, but merely the level of living, existence of slum conditions, etc. The sharp peak in the labor demand does, in fact, necessitate over a third more outside workers during a single month than are required in Arvin during its busiest month. This is a function of the sharply peaked demand, and therefore nullifies the effect of Dinuba's disadvantage in this respect. Though Dinuba requires more imported manpower during the single peak month of employment, the total amount of imported work required is very nearly the same. (See appendix C.) The proportion of imported labor requirements to the total is less.

Size of farm operations is the third characteristic of farm organization, and the one that the present study was designed to test. We find that the differences between average size of farm are great—in the neighborhood of 9 to 1 when taken on an acreage basis, 5 to 1 in value of products, and 3 to 1 if adjusted for intensity of operations. Nine-tenths of all farm land is operated in units of 160 acres or more in Arvin as against one-fourth in Dinuba.

Repeated allusions have been made to this factor. We have seen that water resources, historic timing, and type of farming were each to some measure responsible for the large farms in Arvin and the small ones in Dinuba. We have also seen that scale of farming operations had an effect upon the demography of the population, farm tenancy, and, above all, on the requirements for hired labor in each area and the occupation structure of the two communities. It is also true that throughout the intensively cultivated areas of the State, those communities with large-scale farming generally offer fewer economic and social services than those with moderate-sized farms. There remains no question that size of operations is therefore an important factor in establishing the kind of social environments found in Arvin and Dinuba. The place of this factor in the causal forces will be presented in detail in the succeeding section of this chapter.

AN EXPLANATORY HYPOTHESIS

It is now possible to formulate a hypothesis of the chain of causative forces which were responsible for the divergence of social conditions between the two communities whose fundamental cultural heritage and economic circumstances are similar. In formulating such an hypothesis all the pertinent known facts should be explained and their forces understood in terms of recognizable social process. Naturally such a formulation cannot be complete and final but can approach that only insofar as social processes are presently recognized and understood.

The physical landscape and the geographic position of Arvin and Dinuba are sufficiently similar to produce an agricultural base to support communities equivalent in facilities offered, except that the water supply in Arvin created special circumstances. The necessary depth of the water level and the attendant need for larger capital investments delayed the intensive development of Arvin soils until adequate pumps were produced, and inhibited somewhat the growth of small farms. The delay in development made the land available to big operators at a time when industrialized fruit production in California was at its inception. Therefore, the water situation was doubly responsible for the fact that Arvin was a large farming community. It should be noted, however, that the water supply did not prevent small farms, and a few such units came into the community early and have been farmed continuously ever since. It is doubtful if the water supply had any other direct effects, though its cost may have created specific hardships in an earlier era. It is probable that other causes were contributory to the development of large-scale operations and the belated development of the area, but such causes are not readily apparent and were not the subject of specific analysis. High investment for farm development because of the water situation may also have been a contributory cause to the high tenancy in Arvin, since owners could rent to operators who irrigated several pieces of land from a single well.

The scale of operations that developed in Arvin inevitably had one clear and direct effect upon the community. It skewed the occupation structure so that the majority of the population could only subsist by working as wage labor for others. It probably had some effect upon the development of row crops. The relatively late development of Arvin placed it in a period of growing demand for vegetables and other row crops as contrasted with fruit. These two forces combined to give Arvin a large proportion of row crops, though fruits were also developed to a considerable extent. The large need for labor, and the period of major growth resulted in the aggregation of a large proportion of destitute white migrant labor with poor social and economic background. There is evidence that the quality of persons attracted by the kinds and conditions of work opportunities is somewhat poorer than was attracted to the situation in Dinuba.

The occupation structure of the community, with a great majority of wage workers and very few persons independently employed and the latter generally persons of considerable means, has had a series of direct effects upon the social conditions in the community. These effects are applicable only given the total cultural situation that exists in America and particularly in California agriculture. The large labor population means inevitably large groups with poor economic circumstances, for the conditions of wage work in agriculture have permitted of nothing else. This in turn means poor housing, low level of living, existence of slum conditions and little money for community improvement. It means that a large portion of the population has little vested interest—economic or social—in the community itself. Such lack of ties, together with the seasonal nature of wage work in agriculture, results in a high turn-over of population (or instability of residence). The laboring population does not take leadership in general civic action and rarely supports organizations that exist, out of a usually well substantiated feeling of ostracism that results from the large differences in economic status. Thus general social facilities do not come into being for lack of leadership and support. This tendency is furthered by their own lack of funds and by their instability as residents in the community.

The occupation structure leaves few who are in an economic and psychological position of leadership. These few consist largely of people who can afford to engage in the social activities of urban centers and who regularly do so. This mobility tends to drain their social interests away from local activities and renders them a less valuable asset to local community welfare then are less well-to-do farmers, though their value to the broader area of activity may be equally great.

This social mobility engendered by their well-being was made possible by the fact that the automobile gave them physical mobility as well. That this mobility was available to them from the outset made it unnecessary to develop local satisfactions, whereas if they had once been developed they would likely have continued. Thus the period of development of Arvin was a contributory cause to its social poverty.

The fact that the large farming community is of necessity made up of large groups of laborers with low incomes on one hand, and a small group of well-to-do persons on the other tends to impoverish its social institutions of the leadership they require. It also impoverishes retail trade. For the farm laborer is generally unable to make a normal complement of purchases for family living because of his poverty, while the farm operator tends to make his purchases, as he does his social contacts, in the city. Thus the merchant group does not grow proportionate to the population, but lags behind it. This again reduces the proportion of independently employed.

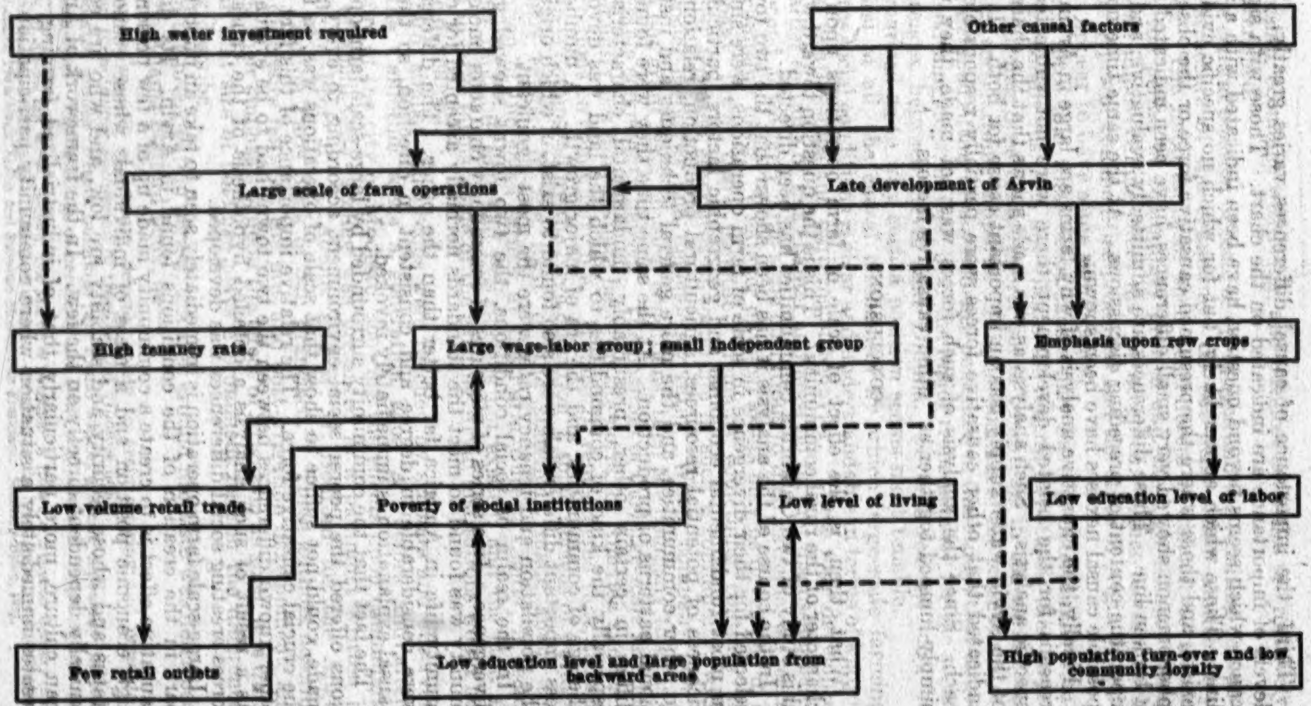
The lack of economic and social facilities in the community has a continuative effect. The poor conditions tend to repel those very people who are most needed to enrich it. It was pointed out by farmers, merchants, and laborers alike that persons did not plan to make Arvin their home because of this very lack of facilities. It is very probably one cause for the high tenancy ratio in Arvin, since landowners will often prefer to live elsewhere and live off their rentals. It is possibly a cause for the fact that the average educational attainments of farm workers are below those in the same occupations in Dinuba.

The occupational structure has some influence upon political life in the community. The failure to develop real local interest in community affairs is a prime factor in this causal relationship. The mutual exclusiveness of the two major strata of society also inhibits the development of the community solidarity that would be expected in a more homogeneous group and thus prevents the development of a civic organization. The fact that the group from which natural leadership arises represents but a small minority, while those whose position is relatively insecure forms an overwhelming majority is a further reason for the failure of Arvin to incorporate. The existence of a strong and rich county government contributes to the fact that such political institutions were not developed.

The high rate of tenancy and absentee ownership may reduce further the proportion of persons who are willing to assume leadership. No information on participation by tenure, other than the operator-laborer dichotomy, was obtained. While such effect of tenure pattern upon the social organization is not supported by empirical evidence, the reverse effect, that the social environment increases tenancy, does receive some support.

The accompanying diagrammatic table presents a visual summary of the preceding discussion. The overconcreteness implied with lines and boxes is unavoidable and the chart should be read in terms of the text and other specific strictures. Foremost of these strictures is the fact that the whole chain of causation and intercausation is valid only within the frame of reference of the culture common to the two communities and the area of industrialized farming. Thus the scale of farm operations only creates the occupational structure found under the assumption that land is individually owned and requires hired labor. Cooperative farming would have a different effect. Again, the effect of occupation structure upon social institutions, retail trade, level of living, and demographic character of the population is applicable only in terms of accepted class patterns of behavior and wage scales general in the area. To be complete, therefore, these cultural forces would have to be recognized. Intermediate steps and causal mechanisms have frequently been left out. The second stricture is that all terms indicating qualitative or quantitative comparisons (low, few, poverty, etc.) have direct reference to the comparison of Arvin to Dinuba. Specifically, the causal forces relate to the explanation of the differences between those two communities.

TABLE 45.—*Diagrammatic presentation of causative forces responsible for the character of Arvin as contrasted with Dinuba*[1]


High water investment required
Other causal factors
Large scale of farm operations
Late development of Arvin
High tenancy rate
Large wage-labor group; small independent group
Emphasis upon row crops
Low volume retail trade
Poverty of social institutions
Low level of living
Low education level of labor
Few retail outlets
Low education level and large population from backward areas
High population turn-over and low community loyalty

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[1] For meaning of this table, and strictures on its usefulness, see text, pp. 110 and 112.

Third, the importance of causal differences varies greatly. Two levels of importance are indicated on the chart. Those with significance which seems beyond question have been indicated with a solid line. Those which appear likely, but for which no specific evidence exists, and those where the presumed causative force or the observed phenomenon showed very small differences, have been indicated with a broken line. These differences are admittedly evaluative, and rest upon the content of preceding discussions. At the same time not all possible causal nexuses have been shown.

Finally, the causative analysis of why farms are large in Arvin and reasons for the belated development there were not subjected to specific analysis. Such analysis as was made shows that the character of the Arvin water supply was an important cause for both. It also indicated that other causative forces were partially responsible for each. Since the analysis of such forces was not made, they were simply lumped together as "other causative factors."

CONCLUSIONS

What, then, is the effect of scale of farm operations upon the character of the rural community? This is the question toward which this study of two California communities has been directed.

In the course of the analysis it has been shown that the two towns, selected for their divergence in scale of farm operations, were similar in most fundamental economic and geographic factors, particularly richness of potential resources, agricultural production, relationship to other communities, and the more general techniques and institutional patterns of production. At the same time they were found to differ in certain other, presumably fundamental characteristics, especially the kind of commodities to which the land was devoted, the age of communities, and the era of major growth. A number of less important differentials were also found to exist, of which origin of the population and tenancy rates were the most significant.

In the realm of social conditions, the two towns showed great divergence. In a series of measures of community character one community was found to meet the standards normally accepted for community life in America far better than the other. The differences were considerable in degree and consistent in direction, so that a causal explanation is immediately invoked.

The fact that the community surrounded by large-scale farm operations offered the poorer social environment according to every test made, could not suffice to show that scale of operations was, in fact, the crucial causative force. The relative importance of this fact and other known differences between the two towns had to be evaluated. As a result of such analysis a detailed hypothesis of the causative forces creating social differences was developed.

Large-scale farm operation is immediately seen to take an important part in the creation of the conditions found in Arvin. Its direct causative effect is to create a community made up of a few persons of high economic position and a mass of individuals whose economic status and whose security and stability are low, and who are economically dependent directly on the few. In the framework of American culture, more particularly that of industrialized farming, this creates immediately a situation where community participation and leadership, economic well-being, and business activities are relatively impoverished.

The central position of scale of operations and the resulting occupation structure of the community do not deny other contributory causes. The importance of such other forces is difficult to assess. That the period of community growth and the high tenancy rates have an impoverishing effect may be accepted. Other factors, such as the types of commodities produced and the state of origin of residents appear to have some significance.

Such force that these other causes may have in determining community conditions does not vitiate the central hypothesis that large-scale farming does create poorer social conditions in the rural community such farming supports. It is the position of the present writer, after detailed sifting of the evidence presented in this study, that large-scale farming does, in fact, bear the major responsibility for the social differences between Arvin and Dinuba. Several reasons may be summarized as to why such a position seems most tenable.

First of all, the causal mechanism by which large-scale farming creates social conditions is clear and understandable in terms of known social relationships and patterns of behavior. These were developed in earlier sections of this chapter and need no further discussion here.

Second, if we carry large-scale operations to their extreme, we reach the company town. Whatever physical assets may be developed in a company town, there inevitably remains something contrary to normal accepted standards of social life in such a community, with its social hierarchy and dependency ratio. Where company policy does not grant good physical conditions, then the company town is a miserable community indeed. The position of the large-scale farming community lies intermediate between the norm for America and such aberrations on community life. It must be remembered that, though Arvin is dominated by the large operation, a small nucleus of working farmers exists. In the light of the statement made about the function of the small farmer at the Farm Bureau Center, it seems highly probable that had this nucleus not existed, and the land all held in large farms, some of the existing Arvin institutions would not have developed.

Third, similar conclusions were reached by scholars and observers of the California scene a generation ago. A "before and after" picture of the city of Modesto, showing the effects upon community life of small-scale farming was presented in a pamphlet written in 1920 by Prof. R. L. Adams and W. W. Bedford for the Anglo and London Paris Bank of San Francisco.[23] These authors describe the difference between the pre- and post-irrigation development, and while their emphasis is upon the effect of irrigation as such, it is quite clear that size of holdings plays a prominent part in the differences they describe.

In the preirrigation period, the area around Modesto was described, in the Adams-Bedford book, as—

> an extensive strip of country devoted solely to grain growing and presents a rather monotonous succession of treeless and vineless fields.
>
> Isolated groups of farm buildings [are found which] are not especially inviting or homelike. The holdings of necessity are large and social intercourse is some-

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[23] R. L. Adams and W. W. Bedford, The Marvel of Irrigation: A Record of a Quarter Century in the Turlock and Modesto Irrigation Districts—California. Compiled by the Bond Department of the Anglo and London Paris Bank, Sutter and Sansome Streets, San Francisco. Second edition, 1921.

> what restricted. The family keep rather much to themselves—extra help when it is needed, being recruited from a class of labor which is best satisfied if left to itself.
>
> Its [Modesto's] general appearance reflected the declining prosperity of the country upon which a strictly agricultural town must rely for its existence—rough, unpaved streets—muddy in winter and dusty in summer, its stores a collection of mostly one-story unpainted, rickety frame buildings, its water supply from private wells, its sewerage nil, its lighting system coal oil lamps, its population but a few hundred people. * * * (Pp. 15–17.)

In contrast is the postirrigation picture in which small units make for close association and the development of homes. The authors say:

> Farming it is said, is a "mode of life." If this is so, then the real test of a section is to be found in the home building of its people. Applying this test, as a preliminary, to the Modesto district one soon finds full justification for all the time, thought, energy, and money spent in water development. For the outstanding feature which first strikes the investigator is that the district is essentially a home district. Pretty bungalows and tidy dwellings, lawns, vine covered porches, roses and old-fashioned flowers, shade trees and well-kept grounds are all strong testimonials that a home-loving people are settling in the community * * *. The small size of the holdings brings the houses rather close together, and a drive in any direction in the most fully settled sections unfolds a succession of pretty homes and a general spirit of contentment.
>
> Today it would be hard to find a more prosperous, bustling town than Modesto * * *. [It] is essentially a "home" town. Civic pride is reflected in its flowers, its streets, its parks, its school system * * *. (Pp. 17–20.)

Finally, cursory examination of other communities in California's intensively cultivated agricultural areas substantiates this point of view. In general, the following are associated: new communities, the cultivation of row crops, and large-scale operations. Where they are so found, communities in the Arvin pattern are found. But where the former two are found with small-scale operations, these communities acquire most of the characteristics of Dinuba. On the other hand, none of the towns whose agriculture is made up predominantly of large-scale operations has these amenities.

The study of Arvin and Dinuba shows, therefore, that quality of social conditions is associated with scale of operations; that farm size is in fact an important causal factor in the creation of such differences, and that it is reasonable to believe that farm size is the most important cause of these differences.

APPENDIX A

SOURCES OF DATA, METHODOLOGY, AND SAMPLING TECHNIQUE

The nature of the study required the use of several methods and sources of data: community delineation, interviews, schedules, and statistical data on farming and business enterprises and data on membership in clubs and churches. The methods and sources are briefly described.

(1) *Community delineation.*[1]—The community, for purposes of this study, includes the farm area around the town, within which the people normally go to the town for their goods and services. The boundary of the community so defined was established by recognized techniques. First, the civic leaders were asked to indicate these boundaries on a map. Second, the margins were affirmed by interviewing persons living in doubtful areas as to their own community affiliations. In Arvin the boundaries were quite clear and there were no subcommunities or neighborhoods. In Dinuba there was considerable fluidity at the edges, especially toward the towns of Reedley and Kingsburg, and occasionally a "neighborhood" or a subcommunity based upon common religious tenets was found.

(2) *Interviews.*—About 30 persons in each community were interviewed. Such interviews were had with leaders in civic affairs in general, and leaders or representatives of different social, religious, and economic organizations. The interview was informal and designed to elicit information on the general character of the social and economic institutions of the community with particular reference to that phase of community life with which the person being interviewed had some direct connection. Data on the history of the communities were also obtained by means of interviews. Old records were sought, and provided valuable evidence on the development of the community. General statements concerning the effect of large farm enterprises on the community were obtained, as well as opinion of the present reclamation law. Especially important in this regard were the statements made by farm leaders. The interviews were not, however, in the nature of an opinion poll, but were designed to determine factually the social character of the community.

(3) *Schedules.*—Schedules were taken from a 10-percent sample of homes in each community by two trained investigators over a period of a month each in the two communities. The schedule falls into four sections: (A) Family composition, occupation, and history; (B) social participation in clubs, churches, and informal social events; (C) purchasing habits; and (D) level of living. A copy, edited to conform to actual practice after field alterations, is reproduced at the end of this appendix statement. (Begins on p. 118.) A few notes are necessary to clarify the meaning. Lettered items in boxes were used for coding;

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[1] The work of community delineation was done by Walter C. McKain, Jr., regional leader, Division of Farm Population and Rural Welfare, Bureau of Agricultural Economics.

items in parentheses were to be supplied by schedule editor. Numbers for family members in question A–3 were used for reference in question B–1, 5, and 6.

(4) *Sampling techniques.*—Each community was divided into two categories: town and rural. The town sample included the area of the town itself—in Dinuba bounded by the incorporated limits, in Arvin by the area of contiguous congestion. Every house in each sample was plotted on a map and the houses numbered consecutively, circling each block clockwise. (Figs. 12 and 13 in the text reproduce the maps of the town and show the houses sampled.) Every tenth number was selected as the sample, and the enumerators instructed to take only the house enumerated, making recalls where necessary. The number of actual houses covered by the survey was 1,304 in Arvin and 2,161 in Dinuba. Due to errors in numbering, two houses too many were included in Arvin, three too few in Dinuba, or a total sample of 132 in Arvin and 213 in Dinuba. No residents refused cooperation in Arvin, but seven refused to answer these questions in Dinuba. The occupation and number of persons in the household were obtained for each of these. Occasionally individual items were omitted because of reluctance on the part of the interviewee or for some other unavoidable reason. This technique was applied with all reasonable care, and can be assumed to represent an adequate random sample of the universe included.

This universe included all households within the area delineated as belonging to each of the respective communities. The only exception to this statement was the houses on the DiGiorgio property, where permission to enter was not granted the field workers. The approximate number of houses was obtained from the management, and these were included in the population estimates (assuming the average persons per family consistent with farm laborers in Arvin). They were not included for any other statistical analyses, not even the distribution of families by occupation of family heads. Most of the residents are farm laborers.

The universe, by definition, includes only residents at the time of field work. Field interviews were made in each community at a time (March-April in Arvin, April-May in Dinuba) when the local employment opportunities in agriculture were insufficient to employ fully the local labor supply (see fig. 6 of text, p. 35). Thus, itinerant workers with residence outside these communities were excluded from the analysis of schedule data.

(5) *Statistical information.*—Statistical data of various kinds, other than those developed from the schedule, form a crucial part of the evidence. Information on crop production was obtained from the agricultural commissioners of the respective counties and from other sources. School attendance and enrollment records were obtained from the superintendents of schools. Two special sources of statistical data were available. Data on farms, classified by size and type, and on acreage in the various major crops in each community have been obtained from Agricultural Adjustment Agency records. These data were collected on a three-county area for use in other studies, but special tabulations and analyses were made for Arvin and Dinuba.[1] Information on the volume and character of retail trade

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[1] Edwin E. Wilson and Marion Clawson, Agricultural Land Ownership and Operation in the Southern San Joaquin Valley, Calif. Bureau of Agricultural Economics, Berkeley, Calif. (Mimeographed.) 1945.

and the size of business establishments has been obtained through a careful analysis of the records of the California State Board of Equalization. A description of the nature of these data and the methods of analysis are given in appendixes B and G.

(6) *Church and club membership data.*—Because of the tendency for religious and social bodies to draw distinctions in membership which reflect the degree of social cleavage in the rural community, lists of membership showing occupation were obtained from several representative churches and clubs in each community.

UNITED STATES DEPARTMENT OF AGRICULTURE
BUREAU OF AGRICULTURAL ECONOMICS

Budget Bureau No. 40-4414
Approval expires June 30, 1944

Date........................
Interviewer....................

Sched. No..........
Community..........

COMMUNITY ORGANIZATION

A—

H—

A. General data:

1. Name..

B—

2. Residence..
3. Household composition:

Given name	Sex	Relation to head	Marriage status	Age	Schooling completed	Major source of cash earnings and percent of total earnings		Employer or place of business
						Occupation	Percent	
(1)		Head						
(2)								
(3)								
(4)								
(5)								
(6)								
(7)								
(8)								

E—

F—

4. Birthplace of head.............................. 5. Wife..............
6. Birthplace of father of head.................. 7. Ethnic group..........
8. Year of arrival in community (of head)..............
(No. of yrs....)
9. Last previous residence..............
10. Number of California towns you have lived in since 1935............
11. Number of towns outside California you have lived in since 1935.........
12. Give acreage for 3 major crops: (1)................a. (2)..............
....a. (3)...............a. Total acreage..................
(A.-E. size............) Tenure............ (Type of farm.......)

C—

I—

G—

D—

13. How many separate jobs have you held since 1935?..................
14. What do you consider your home town?..................
15. Does this neighborhood go by a special name?..................
What?....................

B. Memberships:

1. Church and/or Sunday School membership:

Household member	Name of church	Place	Frequency of attendance	Status	Earlier affiliation	J

(Total members ------; total attenders ------; percent churchgoers ----)

2. Did any member of your family change denominations upon coming to this town, or since you have been here? ------------------
3. If so, what was former affiliation (indicate in last column of question 1)?
4. Do you attend church more or less frequently now than before the change? --
5. Club memberships (check through list of clubs and ask for any additional ones):

Household member	Name of club	Meeting place	Frequency of attendance	Office	K

(Total memberships ------- Memberships per person ------)

6. What informal activities did members of your family participate in?

Type of activity	Number of participations per year for each family member								(Total members)	(Total events)
	1	2	3	4	5	6	7	8		
(a) School functions										
(b) Card parties										
(c) Picnics										
(d) Dances										
(e) Movies										
(f) Community affairs										
Total										

7. Do you have a small group of close friends? ------- Number in group? ---------
8. Where do they live? --------------------------------------
9. What do they do? --
10. Do they all belong to one church or club? ------ What one? ---------
11. List families with whom you visited regularly in 1943 and in 1940 (if different) and whom you consider your more intimate friends[3]

Name	Occupation or tenure	Related	Ethnic group	Number visits in— Their home	Number visits in— Your home	Residence	Year

(1943: Total families visited ------. Total visits paid ------)
(1940: Total families visited ------. Total visits paid ------)

12. Do you do more or less visiting now than in 1940? ------------
Why? --

---

[3] Questions 11 and 12 were on schedule but were not used.

Econ. Part. Index:

C. ***Economic participation***

1. **Where did you regularly purchase or obtain the following before gasoline rationing was instituted;**

Commodity or service	Firm	Community	(Coding) (Firm)	(Community)
Groceries				
Men's clothes				
Women's clothes				
Gas and oil				
Farm machinery				
Feed and seed				
Banking				
Doctor				
Movies				
Newspapers				

(Total local..........; Total resp. ....; total in com. ......; total resp. ....)

2. **Where do you go to hire labor**..........
2a. **Where do you go to find work**..........
3. **Did you have vegetable garden in 1943**..........; **in 1941**..........
4. **Did you keep chickens in 1943**..........; **in 1941**..........
5. **Did you have a cow in 1943**..........; **in 1941**..........
6. **Approximately what was your family income in 1943 (check one)**

Under $750..........	$2,751–$3,250..........
$751–$1,250..........	$3,251–$4,250..........
$1,251–$1,750..........	$4,251–$5,250..........
$1,751–$2,250..........	$5,251–$11,000..........
$2,251–$2,750..........	Over $11,000..........

Code value:

D. ***Socio-economic status*** **(enter or encircle proper answer)**

1. **Construction: brick, stucco, painted frame, unpainted frame, other**..........
2. **Number of rooms** .... **(rooms per person** ....)..........
3. **Water piped in house: yes, no**..........
4. **Lighting: electric, gas, pressure, other**..........
5. **Refrigeration: mechanical, ice, other, or none**..........
6. **Radio: yes, no**..........
7. **Telephone: yes, no**..........
8. **Automobile: yes, no; Make** .... **Year**..........
9. **Characterize premises of home by one of following:**
    - **(*a*) Well kept with decorative planting**..........
    - **(*b*) Some decorative planting has been done**..........
    - **(*c*) No planting, but neat and clean**..........
    - **(*d*) Littered and dirty premises**..........
10. **Characterize exterior of house by one of following:**
    - **(*a*) Neat and well painted**..........
    - **(*b*) Old, dirty, or scaling paint**..........
    - **(*c*) No paint or stain**..........
11. **Characterize interior of house by one of following:**
    - **(*a*) Decorated with carpets and curtains, all in good order**..........
    - **(*b*) Poorly decorated but neat and clean**..........
    - **(*c*) Untidy interior**..........
    - **(*d*) Extremely dirty**..........

Church membership of head..........
Church membership of wife..........
Education of head..........
Education of wife..........
Total (L/L Index)..........

APPENDIX B

AGRICULTURAL DATA, SOURCES, AND METHODS[1]

1. *Source.*—Data on the volume of agricultural production, number and types of farms, characteristics of ownership and tenure were obtained from records of the Agricultural Adjustment Agency. These records were obtained and analyzed for studies of the size of farm-operating and farm-ownership units and their use here was incidental to the major purpose for which they were obtained. Record data apply to the year 1940.

The base for these data was the "farm unit." The farm unit is a contiguous piece of land, all of which is operated by one single farmer and owned by one single owner who may or may not be the operator. One owner may have several such units, each with a different operator, and one operator may be farming several such units, each with a different owner. On the basis of these farm units, the operating units (a combination of farm units having the same operator) and ownership units (combinations of farm units owned by the same person or corporation) can be brought together. The former of these are called farms for purposes of this study, the latter are called ownership units.

The Agricultural Adjustment Agency data for each farm unit were recorded on cards and included the following: Location of unit, operator and owner, cross references to other farm units both owned and operated by the same man, total acres in the unit, and acreage by land-use classes, and yield of cotton, potatoes, and wheat. Land-use classes were: Range land, noncrop pasture, lanes and buildings, commercial orchard (including grapes), cotton, wheat for grain, rice, sugar beets, potatoes, commercial vegetables, barley for grain, wheat hay, other grain hay, grain sorghums, summer fallow, idle cropland, alfalfa, ladino, cropland pasture, and spaces for other soil-depleting and other nondepleting crops.

2. *Farm types.*—Farms were classified into 10 types on the basis of these data by specialists in farm management. These types and brief definitions of them in terms of types of land use are as follows:

(1) *Stock ranches.*—Units engaged in the production of livestock by means of range. Included units over 320 acres with 90 percent or more of the land in range, pasture, or hay, but not over 30 percent in hay.

(2) *Forage-consuming livestock.*—Mostly dairies and a few other producers of animal products. Included units with 30 percent or more of the cropland in hay and pasture combined and at least 10 percent in each of these, but with less than 50 percent of their land in field crops. (Classification had to be made without direct knowledge of the number or even the presence of livestock on the unit.)

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[1] The collection of the data from the Agricultural Adjustment Agency records was supervised by J. Earl Lee and the analyses by Edwin E. Wilson, both of the Bureau of Agricultural Economics, Berkeley. Credit for this material is due them, though responsibility for its use rests with the author.

(3) *Specialized fruit ranches.*—Units with 80 percent or more of the cropland in commercial orchards, and at least 2 acres of fruit.

(4) *Major fruit farms.*—Fruit-producing units which are less highly specialized include those with from 25 to 80 percent of all cropland in fruit, provided that at least 2 acres are in fruit.

(5) *Winter field crops.*—Units where 80 percent or more of the cropland is devoted to winter field crops, which includes wheat, barley, oats, flax, small grain hay, or grain pasture.

(6) *Winter and summer field crops.*—Units with land in both winter and summer field crops, but with less than 80 percent of the cropland in either.

(7) *Summer field crops.*—Units with 80 percent of the cropland in summer field crops, which includes cotton, sugar beets, potatoes, commercial vegetables, truck crops, grain sorghums, grain hay, alfalfa, or hay.

(8) *Idle.*—Units where 90 percent of the cropland is not in production.

(9) *Part-time.*—All units except fruit farms having less than 5 acres of cropland.

(10) *Small ranches.*—Units of under 320 acres with 90 percent of the total in pasture.

3. *Farm size.*—The size of units in acres is given in the Agricultural Adjustment Agency records. However, acreage is a poor measure of size as acres in various crops are not comparable in capital requirements, labor requirements, or income potential. For that reason, size in standard acres was calculated for the farms in Arvin and Dinuba. These standard acres were called acre-equivalent acres, frequently abbreviated A-E acres.

A standard acre is a unit of land in any crop which under normal conditions for that crop in the Central Valley of California has the gross-income-producing potential of an acre of irrigated alfalfa in the same area. The size of each operating unit was calculated by multiplying the actual acreage in each crop by the conversion factor which expresses the ratio of income-producing potentiality of that crop to the income-producing potentiality of an acre of alfalfa. The factors used were developed by Arthur Shultis, of the Giannini Foundation of Agricultural Economics, University of California, and apply directly to Madera County. There is no reasonable question of the validity of extrapolation to the neighboring counties. The following is the table of factors used:

Alfalfa	1. 00	Garden	1. 00
Beans	. 60	Grain	. 15
Commercial orchard	2. 00	Grain hay	. 05
Commercial vegetables	1. 80	Grain sorghums	. 30
Corn	. 50	Idle cropland and miscellaneous	. 02
Cotton	1. 40	Lanes, buildings, etc	. 02
Cropland pasture, dry	. 05	Ladino	. 60
Cropland pasture, irrigated	. 40	Melons	1. 00
Flax	. 70	Noncrop pasture	. 02
Nursery	3. 00	Sugar beets	1. 80
Oat and vetch hay	. 20	Summer fallow	. 01
Potatoes	1. 80	Tomatoes	1. 50
Rangeland	. 01	Young and noncommercial orchard	1. 00
Sudan grass	. 20		

A slightly different method, involving the same assumptions but based upon the type of farm as classified above, was used for calculating A–E size in the communities listed in table 1. While this method is less direct, the comparability is great as shown by the fact that in Arvin the A–E size by the special method was 265 A–E acres as against 247 A–E acres by the method used for all communities. In Dinuba the respective figures were 89 and 84.

4. *Gross farm income.*—Gross farm income from all the farms in each community was calculated, using known 1940 acreages, 1937–41 yields, and 1935–39 prices for the San Joaquin Valley.

Estimation of income is fairly direct and highly reliable. Using yields and prices, returns per acre were calculated and these returns multiplied by acres in the various crops. Certain assumptions and manipulations were necessary, since crop data were not always broken down with sufficient exactitude. The following major assumptions were made:

(1) All commercial orchard was assumed to be vineyard. This is very nearly correct for Dinuba, less so for Arvin. Since returns per acre vary in both directions but not very greatly in either, the error of such an assumption is slight. Income was based upon Shultis' calculations.

(2) Commercial vegetables were given the average value of all commercial vegetables, developed by Shultis in his calculations of standard acres. Acreages in commercial vegetables were not broken down by type, so this average figure was necessary. Again, no great error can enter here.

(3) No income from crops was attributed directly to either milo-maize or any of the pasture uses of land. It was assumed that income from these classes was realized through the sale of livestock and livestock products.

(4) Yields were based upon 1937–41 averages (irrigated land) for the San Joaquin Valley. Actual yields were used for cotton and potatoes. Wheat, barley, oats, and rye yields were based upon weighted average of irrigated and nonirrigated yields.

(5) Prices were based upon estimates of prices received by California farmers for the years 1935–39, made by the California Crop Reporting Service.

(6) All unspecified non-soil-depleting crops were assumed to be pasture and all unspecified soil-depleting crops were assumed to be oats.

A tabulation (table 46), based on these assumptions, shows gross income per acre and total gross income for crops.

These estimates can be considered reasonably exact. It is doubtful if there is any appreciable bias which would affect the relative gross returns between two communities, the most important aspect of this table.

Calculations of returns from livestock enterprises were more difficult to arrive at. Estimates of the number of livestock of each kind were made by assuming a proportionate distribution of the total livestock within the minor civil division, as reported by the census of 1940, on an areal basis. That is, the area in farms in each community was calculated as a proportion of the total area in farms in the township, and stock apportioned according to this ratio.

Table 47 shows the number of stock by major classes, the annual income per head, and the annual returns to the community.

These two tabulations show the total gross income (except income from pasture lands and milo) to all farmers, first for crops, and second, for livestock and livestock products. However, it would not be appropriate merely to add these two figures. To do so would include considerable duplication, as no allowance has been made for crops grown which are fed to stock rather than sold.

For that reason calculations of the feed requirements of the livestock in the two communities have been made (table 48). On the basis of these feed requirements and estimated livestock numbers, it is possible to estimate the value of livestock feed. For purposes of bookkeeping, we can assume feeding of local products and purchase of similar feeds to make up the deficit, when such exists. In feeding grains; oats, barley, and wheat were fed in that order, and the remainder was sold after livestock requirements were met. Cottonseed was used as concentrates. The same purchase price as sale price was used. Grain purchased was barley. Using these assumptions, we get the following value of grains, concentrates, and hay fed:

	Arvin	Dinuba
Grains	36,000	64,000
Concentrates	22,000	40,000
Hay	67,000	104,000
Total	125,000	208,000

For bookkeeping purposes it is appropriate to deduct the feed requirements either from gross value of livestock or from crop production. The latter procedure leaves certain crops deficit. Table 49 shows both allocations, while the text (see table 7, p. 26) shows the value of crops produced and the net value of livestock products.

TABLE 46.—*Gross income per acre and total gross income for crops: Arvin and Dinuba*[1]

Crop	Yield		Price	Income per acre	Arvin income		Dinuba income	
	Unit	Amount			Acres	Income	Acres	Income
			Dollars	*Dollars*		*1,000 dollars*		*1,000 dollars*
Grapes				107.50	7,878.0	847	16,294.9	1,752
Cotton				78.64	6,274.3	493	2,357.7	185
Lint	Pounds	623.0	.106	66.04				
Seed	Hundredweight	9.2	1.37	12.60				
Potatoes	Bushels	315.0	.71	223.65	2,047.3	458	10.4	2
Sugar beets	Tons	13.0	5.60	72.80	32.3	2		
Commercial vegetables				90.00	627.1	56	278.1	25
Milo	Bushels	30.0			112.8		961.0	
Wheat	do	16.2	.81	13.12	12,004.3	157	75.6	1
Barley	do	27.1	.50	13.55	3,990.2	54	944.3	13
Oats	do	27.4	.47	12.88	864.4	11	851.0	10
Alfalfa	Tons	4.9	10.16	49.78	3,288.7	163	3,050.1	152
Rangeland	Pasture				170.0		7.7	
Noncrop pasture					1,672.3		4,224.6	
Summer fallow and idle					3,472.4		2,307.7	
Ladino and crop pasture					477.7		727.2	
Other nonreporting					402.0		407.8	
Total						2,241		2,140

[1] For assumptions and explanations, see text.

Table 47.—*Estimated head of livestock and gross income from stock: Arvin and Dinuba*

Class of stock	Unit	Production [1]	Price [2]	Gross income per head	Arvin		Dinuba	
					Number [3]	Gross income	Number [4]	Gross income
			Dollars	*Dollars*		*1,000 dollars*		*1,000 dollars*
Horses and mules over 3 months.[5]					421		749	
Milk cows and heifers over 2 years.	Pounds butterfat	[6] 325	0.466	151.40	1,331	201	1,971	299
Beef cattle over 3 months	Pounds of meat	600	.0736	44.16	825	36	1,924	85
Sows and gelts to farrow	do	[7] 1,930	.0894	172.55	187	32	181	32
Sheep and lambs over 6 months.	do	[8] 58	.0790	4.58	262	1	70	1
	Pounds wool	[9] 10	.24	2.40				
Chickens over 4 months	Dozen eggs	14	.24	3.36	14,150	47	47,900	162
Chickens sold	Pounds meat	[9] 2	[9] .25	.50	8,500	4	22,300	12
Turkeys raised	do	18	[9] .25	4.50	180	1	3,435	16
Total						322		608

[1] Fluharty, In Line Prices. Report to State Agricultural War Board.

[2] State Crop Reporting Service, Prices Received by California Farmers, 1935-39.

[3] Estimated on the basis of 1940 Census of Agriculture, using 31 percent of total for fifteenth township, Kern County, of which Arvin is a part.

[4] Estimated on the basis of 1940 Census of Agriculture, using 55 percent of total for Dinuba Township, Tulare County.

[5] No direct income, figure used to calculate feeding requirements.

[6] Assuming 4 percent butterfat.

[7] Based upon pork produced per sow.

[8] Assumed only ewes recorded in census, 80 percent lamb crop and selling lambs at 72 pounds gives an average of 58 pounds per sheep and lamb.

[9] Estimated production and prices.

Table 48.—*Feed requirements for livestock* [1]

Kind of livestock	Grains	Commercial by-product	Hay
	Pounds	*Pounds*	*Pounds*
Horses and mules, including colts	450.0		4,900
Milk cows over 2 years old	900.0	850.0	8,000
Dairy heifers under 2 years old	50.0	0	1,200
Beef cattle over 3 months old	50.0	[illegible].0	,700
Sows and gelts to farrow	375.0	25.0	30
Sheep and lambs over 6 months old (hundredweight)	8.0	8.0	160
Chickens over 4 months old	66.0	18.0	
Chickens sold	6.7	3.9	
Turkeys raised	80.0	18.0	

[1] Pasture excluded.

Source: 1943 Maximum Wartime Production Capacity Study for California, p. 30, Appendix, Bureau of Agricultural Economics.

Table 49.—*Dollar value of commodities produced in Arvin and Dinuba*

[In thousands of dollars]

Commodity	Arvin			Dinuba		
	Produced	Amount fed	Net value	Produced	Amount fed	Net value
Fruit	847		847	1,722		1,722
Cotton:						
Lint	414		414	186		186
Seed	79	22	57	29	40	−11
Grain	222	36	186	24	64	−40
Vegetables	516		516	27		27
Forage crops	163	67	96	152	104	48
Total crop value	2,241	125	2,116	2,140	208	1,932
Value of livestock [1]	197	125	322	400	208	608
Total value of production	2,438		2,438	2,540		2,540

[1] For value of livestock the net value (above feed) appears first, and the gross value appears in the third column. This reversal is appropriate since the livestock consume the feed.

5. *Cost of production and net profit.*—The calculations presented in the preceding section of this appendix indicate gross returns (deducting only cost of livestock feed). No calculations have been made either of the net returns to farm operator or of the unit cost of production. It has been assumed that net income and total cost of production per acre are the same for both communities. This assumption is reasonably accurate, though not exactly so. Cost of water (and perhaps other production factors) is somewhat higher in Arvin than in Dinuba, but labor costs in Dinuba appear to be greater. Since Arvin producers reach an extremely early market they probably receive higher prices. This is particularly true of fruits, potatoes, and commercial vegetables. Yields on the relatively new soils of Arvin are also advantageous.

The major cost of production disadvantage in the Arvin area is the cost of water. Because it seemed possible that the cost of water might be sufficient cause to account for the different economic conditions in the two communities, a careful analysis has been made of water costs in the two communities. It should be pointed out that, in the long run at least, water costs should be absorbed by land value, since the land values are very low without water and the two combined are an economic asset far exceeding the sum of each separately. Ignorance of irrigation requirements and costs may make this consideration inoperative on a short-run basis.

Water costs were calculated on units of average size for each community, and the cost of water in Arvin was also calculated on the basis of average size of units in Dinuba, in order to make more direct comparisons possible. These sizes are: Dinuba, 57 acres; Arvin, 497 acres and 57 acres.

The following assumptions were made:

(1) Duty of water: 2 feet 3 inches in Dinuba (average for San Joaquin Valley) and 2 feet 11 inches for Arvin (adjusted to allow for differences in precipitation). On this basis total annual water requirements per farm are: Dinuba, 143 acre-feet; Arvin 1,451 and 166 acre-feet.

(2) Irrigation season of 7 months with wells operated half the time during these months, and peak demands were assumed to be taken care of by full-time use of wells during those periods. Well requirements on this basis are: Dinuba, 309 gallons per minute; Arvin, 3,135 and 359 gallons per minute. Single wells would be sufficient for 57-acre farms, but three wells would be required for the 497-acre farm.

(3) Average water-level conditions in each community were used. A report of the Alta irrigation district, based upon 65 wells and made in 1931, indicated an average depth of 43.5 feet. A report to the Kern County Water Development Commission entitled "Cost per Acre-Foot of Pumped Irrigation Water in Kern County," by C. H. Monett, based upon eight Arvin wells and made in 1933 was used for Arvin. This report indicated a depth of 114 feet, but this was increased to 151 feet on the basis of information as to the recession of the ground water level since that date. These two reports indicated average draw-down of 8 feet in Dinuba and 26 feet in Arvin, and these figures were used. A pumping head of 54 feet and of 182 feet was used for Dinuba and Arvin, respectively, allowing for discharge of water at a point a few feet above the ground, as indicated in these reports.

(4) Pumping efficiency was reported in these two sources and was calculated at 42 percent and 64 percent for Dinuba and Arvin. These figures are in keeping with observations made since that time, with considerably more efficiency on the larger pumps. The lower pump efficiency was used for the small farm in Arvin, in keeping with this observation.

(5) It was assumed that all pumping was done by electricity, since but few pumps are driven by gas or butane. On the basis of flow and pump efficiencies, the kilowatt-hours required per acre-foot of water were calculated on the basis of the following standard formula:

$$\text{Kw.-hr.}=\frac{43{,}560\times 62.4\times 746\times \text{head}}{33{,}000\times 60\times 1{,}000\times \text{efficiency}}=1.024\,\frac{\text{head}}{\text{efficiency}}$$

This resulted in a kilowatt-hour requirement of 132 for Dinuba and 291 for the large Arvin farm and 444 for the small Arvin farm (higher because of assumed lower efficiency). The total kilowatt-hours for each of these sizes, based upon water requirements are: Dinuba 18,860; Arvin, 422,241 on the larger unit, and 73,704 on the smaller.

(6) The size of motor was calculated on the basis of the above data according to the following standard formula:

$$\text{H. P.}=\frac{\text{G. P. M.}\times 62.4\times \text{total head in feet}}{450\times 550\times \text{efficiency in percent}}$$

On the basis of this calculation, a 10-horsepower motor was required in Dinuba; three 75-horsepower motors on the large Arvin unit and one 45-horsepower motor on the smaller unit.

(7) The demand and energy charges for power were developed on the basis of rates used by the Pacific Gas & Electric Co., which serves these areas. It has three agricultural power rates, known respectively as schedule P-3-S, schedule P-12-S, and schedule P-13-S. The first two schedules embody demand charges which are based upon the connected horsepower load and energy charges which are based upon the number of kilowatt-hours consumed. The third schedule has only a charge for energy, but in using this schedule the operator must guarantee a minimum charge per horsepower of connected load. Schedule P-12-S can only be used where the connected horsepower load amounts to 200 horsepower or more. Power bills were calculated on the basis of all applicable schedules and the lowest cost used, in keeping with actual procedure. It developed that schedule P-13-S resulted in the lowest total power bill for each unit.

The cost of pumps and motors was developed from information collected in the field observations made in the San Joaquin Valley in the winter of 1944, when records on size of motors and original cost were obtained. On the basis of these observations, costs were assigned. These costs are below present costs of such motors but in line with the cost of motors of these sizes over the past 20 years. The following costs resulted from these calculations: $800 for the pump and motors on the Dinuba farm, $2,500 each for the three pumps and motors on the large Arvin farm, and $1,700 for the pump and motor on the small Arvin farm.

(8) Records from the report for Kern County referred to in the foregoing indicate that the average depth of the well in the Arvin community is approximately 500 feet. This depth was used for all wells in that area. Comparable records were not immediately available for Dinuba. However, on the basis of the total pumping head

and depth of wells required in other areas having a comparable head, 100 feet was assumed for Dinuba.

Current field reports indicate that it cost from $3 to $5 per foot to drill a well and put in the casing in these areas. An average of $4 per foot was assumed for wells in both communities regardless of required size of casing or depth of well. On the basis of this information the average investment in wells on farms of the size indicated was $1,200 for Dinuba, $3,700 for the small farm in Arvin, and $13,500 for the three wells on the large farm in Arvin. These costs would be higher under wartime prices.

(9) Because a large proportion of the water in the Dinuba area is surface water, brought by diversion from the Kings River, certain special adjustments must be made. It has been assumed that the facilities for a full water supply were maintained, but power, repair, and service costs were adjusted to actual requirements. During the past 12 years the amount of water delivered by the district varied from about 2 inches to nearly 2 feet per acre, so that an assumed supply requires a well that will furnish virtually full water requirements.

Over 12 years, from 1930 to 1941, inclusive, the Alta irrigation district delivered an average of 1.18 acre-feet of gravity water to all land within the district. It was, therefore, assumed that 1.32 acre-feet per acre of water would be pumped per year. This reduces the kilowatt-hours required from 18,876 to 9,931. Repair and service charges were arbitrarily reduced from $12 per year to $8 in light of this adjustment. These savings were partially offset by cost of surface water, as follows: The 1941 annual report of the Alta irrigation district indicates that the average assessment was 59 cents per acre. This resulted in a total bill for gravity water of $33.63 for the 57-acre farm.

(10) The tax rate used was based upon the Kern County report. Actually for tax purposes the pumping plants are valued considerably less than the figures used here while the tax rate is higher. The final result is very nearly accurate.

On the basis of these assumptions, the following table of water costs on the three hypothetical units is presented:

TABLE 50.—*Itemized comparative costs of irrigation in Arvin and Dinuba by size of farm*

Item	Arvin		Dinuba—57-acre unit
	497-acre unit	57-acre unit	
Total investment in pumping plants	$13,500.00	$3,700.00	$1,200.00
Fixed costs:			
Interest at 5 percent	675.00	185.00	60.00
Depreciation at 5 percent	675.00	185.00	60.00
Taxes at 4 mills	54.00	15.00	5.00
Gravity water			34.00
Total	1,404.00	385.00	159.00
Variable costs:			
Repair and service	120.00	40.00	8.00
Energy	1,915.00	384.00	61.00
Total	2,035.00	424.00	69.00
Total costs	3,439.00	809.00	228.00
Cost:			
Per acre	6.92	14.19	4.00
Per acre-foot of water pumped	2.37	4.87	1.59

APPENDIX C

ANALYSIS OF MONTHLY LABOR REQUIREMENTS

The data on monthly labor requirements were based upon the acreage in various commodities and the requirements for all labor as established by detailed farm management records for most of those crops, supplemented by additional information for specific crops when not covered by these farm management records. Tables 51 and 52 (pp. 130 and 131) show the crops and acreages, the monthly peracre labor requirement, and the total labor requirement in each community for Arvin and Dinuba, respectively.

Crop acreages were obtained from the Agricultural Adjustment Agency data. Alfalfa, cotton, grain, sorghums, pastures, and potatoes were given directly for the year 1940. Minor crop acreages were eliminated. Grapes were segregated from deciduous fruits in Arvin on the basis of average tonnage shipped during the 3 years 1941–43. Eleven percent of the total acreage was allocated to deciduous fruit and 89 percent to grapes. About 90 percent of all deciduous fruits were plums, and the seasonal labor requirements for plums was used for the total quantity. The error would amount to far less than 10 percent here, because all deciduous fruits compete heavily for labor. In Dinuba fruits were segregated into four classes, based upon proportions of each as indicated in the data obtained from the local farm labor office.

Monthly requirements for all labor were obtained from a series of records taken by the staff of the Bureau of Agricultural Economics from farm operators in the upper San Joaquin Valley. The following tabulation indicates the number of records used for each major crop, or the alternate source of data.

Crop	Type units include	Number of records
Alfalfa	Old alfalfa, all sizes	9
Cotton	All sizes	27
Grain	Barley	4
Sorghum	Milo (medium size)	1
Pasture	Medium irrigated pasture	3
Potatoes	All sizes	7
Raisin grapes	Thompson seedless	5
Other grapes	Thompson seedless (leaving out turning and rolling of trays).	5
Deciduous fruit (Arvin)	Data on plums from R. L. Adams [1]	
Deciduous fruit (Dinuba)	Data on miscellaneous fruits from Farm Labor Advisory Committee.[2]	
Citrus fruit (Dinuba)	Data on citrus fruits from Farm Labor Advisory Committee.[2]	

[1] R. L. Adams, Agricultural Labor Requirements and Supply, Kern County. Mimeographed Report No. 70, Giannini Foundation of Agricultural Economics, June 1940, Berkeley. Table 9, p. 16.

[2] Tabulation entitled "1944 Estimate of Number of People Needed in Agriculture in Tulare County," summary of survey by Agricultural Extension Service in cooperation with Tulare County Farm Labor Advisory Office.

The data from farm records include all labor, while those from published sources refer to hired labor only. No correction was made for this difference, since the total amount of labor involved and the proportion of work performed by the operator is small.

Probably the major source of error in these calculations derives from using selected crops. The total requirement is little affected by this, but for both communities it results in a slight tendency to accentuate the peaking of labor demand.

An estimate was made on the proportion of labor performed by the operator and by local labor. These are really estimates of potential labor rather than actual labor performed by these groups. Farm operators were assumed to work a maximum of 250 hours per month. The number of farm operators indicated in the Agricultural Adjustment Agency data is 133 for Arvin, 722 in Dinuba. Obviously all farm operators do not work at labor full time, so that the actual labor so furnished was less, and proportionately less, on the big operations in Arvin than on the small operations in Dinuba. However, availability of operator for management should compensate in increased efficiency at least to the extent of his own labor. On the basis of these claculations Arvin farmers have a potential supply of 33,000 man-hours of labor per month and Dinuba operators 180,000 per month.

The potential local labor supply was determined by the number of resident laborers (farm labor and farm foremen) recorded in the schedules. Assuming the recorded laborers represent 10 percent of the total, and adding the 140 laborers resident on the DiGiorgio farms, the available labor in Arvin was 940 and in Dinuba 550. It is assumed that this group normally worked 200 hours a month when work was available and can furnish a maximum supply of 188,000 man-hours of work in Arvin and 110,000 in Dinuba. Beside these, there are a number of workers available during the peak season. In Arvin 69 such part-time agricultural workers were recorded, while in Dinuba there were 60. Assuming these represent 10 percent of the total (the sample proportion) and that they worked 100 hours per month when work was available, they could supply an additional sixty-nine and sixty thousand man-hours during peak months. Altogether, there are available, on the basis of these assumptions, 287,000 man-hours of labor per month in Arvin and 350,000 in Dinuba. Packing-shed labor was not included in any of these calculations. The following tables show the monthly break-down of this labor supply against calculated demand:

TABLE 51.—*Calculations of labor requirements, by months and by crop classes: Arvin*

A. FACTOR USED IN CALCULATING LABOR REQUIREMENTS[1]

	Alfalfa	Cotton	Grain	Sorghum	Pasture	Potatoes	Grapes	Other deciduous fruit	Total
Month:									
January	0.1	5.0	0.4	0	0.9	8.2	0.6	20.9	....
February	0	3.4	0	0	1.0	6.9	14.5	.2	....
March	2.2	3.0	0	1.9	5.3	3.9	12.8	2.2	....
April	12.0	2.9	0	0	12.4	11.6	9.9	62.8	....
May	11.9	8.7	0	.7	12.2	47.6	6.1	1.3	....
June	13.0	6.6	1.0	.4	12.1	26.8	8.0	101.2	....
July	12.2	8.0	.2	4.5	14.0	.8	15.1	356.0	....
August	11.7	6.0	.4	1.9	15.6	0	7.2	1.1	....
September	12.1	12.5	1.4	0	14.9	0	22.9	0	....
October	2.4	20.7	.7	0	13.7	.7	18.4	0	....
November	0	16.6	.6	1.6	6.9	.4	2.1	0	....
December	0	13.0	1.6	0	4.9	2.6	6.4	20.9	....

[1] Estimates of man-hours of labor required per acre during month. See text for fuller explanation.

TABLE 51.—*Calculations of labor requirements, by months and by crop classes: Arvin*—Continued

B. ESTIMATED ACREAGE IN EACH CROP CLASS[3]

	Alfalfa	Cotton	Grain	Sorghum	Pasture	Potatoes	Grapes	Other deciduous fruit	Total
Acreage	3,284	6,276	15,996	113	1,078	2,047	7,039	256	....

C. ESTIMATED LABOR REQUIREMENTS[4]

	Alfalfa	Cotton	Grain	Sorghum	Pasture	Potatoes	Grapes	Other deciduous fruit	Total
Month:									
January	328	31,370	6,398	0	970	16,785	67,295	25,893	149,039
February	0	21,232	0	0	1,078	14,124	101,651	280	138,425
March	7,225	18,822	0	215	5,713	7,983	89,715	1,905	131,578
April	39,406	18,196	0	0	13,967	23,715	69,289	54,385	218,489
May	39,080	54,584	0	79	12,152	97,437	42,755	1,126	248,213
June	42,692	41,408	15,995	45	13,044	73,283	86,072	90,237	232,776
July	40,035	50,192	3,199	809	13,692	1,635	106,536	305,298	524,837
August	38,428	37,644	6,398	215	16,709	0	80,465	933	180,807
September	30,736	84,609	22,393	0	16,062	0	209,509	0	372,480
October	11,166	129,873	11,197	0	11,835	1,433	128,906	0	294,100
November	0	104,148	9,597	181	7,438	819	14,719	0	136,902
December	0	81,562	25,592	0	5,282	5,322	44,858	25,893	188,509
Total	259,123	672,838	100,769	1,244	119,442	242,560	961,201	506,943	2,856,164

[3] Acreage in crops for community area, as delineated.

[4] Calculation factor times acreage in crop.

TABLE 52.—*Calculations of labor requirements, by months and by crop classes: Dinuba*

A. FACTORS USED IN CALCULATING LABOR REQUIREMENTS[1]

	Alfalfa	Cotton	Grain	Sorghum	Pasture	Potatoes	Raisin grapes	Other grapes	Citrus fruit[2]	Other fruits	Total
Month:											
January	0.1	5.0	0.4	0	0.9	8.2	9.6	9.6	......	15.4	....
February	0	3.4	0	0	1.0	6.9	14.5	14.5	......	14.5	....
March	2.2	3.0	0	1.9	5.3	3.9	12.8	12.8	......	6.1	....
April	12.0	2.9	0	0	12.4	11.6	9.9	9.9	......	14.1	....
May	11.9	8.7	0	.7	12.2	47.6	6.1	6.1	......	14.5	....
June	13.0	6.6	1.0	.4	12.1	35.8	8.0	8.0	......	11.1	....
July	19.2	8.0	.2	4.5	14.0	.5	17.1	15.1	......	19.2	....
August	11.7	6.0	.4	1.9	15.5	0	9.3	7.2	......	25.9	....
September	12.1	13.5	1.4	0	14.9	0	37.0	29.9	......	21.7	....
October	3.4	20.7	.7	0	10.7	.7	10.4	18.4	......	10.7	....
November	0	16.6	.6	1.6	6.9	.4	2.1	2.1	......	5.4	....
December	0	13.0	1.6	0	4.9	2.6	0.4	6.4	......	8.9	....

B. ESTIMATED ACREAGE IN EACH CROP CLASS[3]

	Alfalfa	Cotton	Grain	Sorghum	Pasture	Potatoes	Raisin grapes	Other grapes	Citrus fruit	Other fruits	Total
Acreage	3,636	2,358	1,020	952	4,225	10	11,520	1,970	2,165	640	....

C. ESTIMATED LABOR REQUIREMENTS[4]

	Alfalfa	Cotton	Grain	Sorghum	Pasture	Potatoes	Raisin grapes	Other grapes	Citrus fruit	Other fruits	Total
Month:											
January	304	11,790	408	0	3,812	82	110,592	18,912	9,458	33,941	193,757
February	0	8,017	0	0	4,225	69	167,040	28,565	3,020	31,885	243,230
March	6,679	7,074	0	1,809	22,446	39	147,456	25,216	8,424	13,307	237,350
April	26,425	6,858	0	0	52,514	116	114,040	19,306	5,266	20,527	245,234
May	36,126	20,515	0	666	51,667	476	70,272	12,017	11,240	31,393	234,372
June	39,460	15,563	1,020	281	51,244	358	92,160	15,760	19,940	24,082	259,028
July	37,030	18,864	204	4,284	59,290	5	196,932	30,747	4,760	41,698	392,758
August	35,321	14,148	408	1,809	65,643	0	107,130	14,184	4,330	56,074	229,133
September	26,796	31,529	1,428	0	63,102	0	426,240	58,903	3,744	46,981	653,967
October	10,322	48,811	714	0	45,316	7	223,488	36,248	3,444	28,106	301,315
November	0	39,143	612	1,520	29,282	4	224,192	4,137	13,392	11,001	130,916
December	0	30,654	1,632	0	20,733	26	73,728	12,608	16,072	19,269	174,741
Total	276,627	252,250	6,426	10,472	460,243	1,185	1,953,286	275,800	362,642	65,980	3,456,968

[1] Estimates of man-hours of labor required per acre during month. See text for fuller explanation.

[2] Data for citrus fruits based upon local estimates of requirements.

[3] Acreage in crops for community area, as delineated.

[4] Calculation factor times acreage in crop.

Table 53.—*Estimated monthly labor requirements and theoretical source of labor supply: Arvin*

[1,000 man-hours]

Month	Estimated man-hours required	Estimates of labor furnished by—			
		Farm operator[1]	Resident labor[2]	Resident seasonal labor[3]	Imported workers[4]
January	149	33	116		
February	138	33	105		
March	132	33	99		
April	218	33	185		
May	248	33	188	27	
June	333	33	188	69	43
July	525	33	188	69	235
August	151	33	118		
September	372	33	188	69	82
October	294	33	188	69	4
November	137	33	104		
December	189	33	156		
Total	2,886	396	1,823	303	364

[1] Work performed by 133 farm operators reported in Agricultural Adjustment Agency records, assuming each operator works 250 hours per month for a maximum of 33,000 hours in any 1 month.

[2] Work performed by 940 family heads who are laborers, assuming that each works 200 hours per month when work is available, for a maximum of 188,000 hours in any 1 month.

[3] Work performed by 690 family members other than head, assuming each works 100 hours per month during all months when work is available, for a maximum of 69,000 hours in any 1 month.

[4] Residual employment opportunity for itinerants, following from above assumptions.

Table 54.—*Estimated monthly labor requirements and theoretical source of labor supply: Dinuba*

[1,000 man-hours]

Month	Estimated man-hours required	Estimates of labor furnished by—			
		Farm operator[1]	Resident labor[2]	Resident seasonal labor[3]	Imported workers[4]
January	189	180	9		
February	243	180	63		
March	227	180	47		
April	265	180	85		
May	234	180	54		
June	250	180	70		
July	393	180	110	60	43
August	290	180	110	0	
September	669	180	110	60	319
October	392	180	110	60	42
November	121	121			
December	175	175			
Total	3,467	2,096	768	180	404

[1] Work performed by 722 farm operators, reported in Agricultural Adjustment Agency records, assuming each operator works 250 hours per month, for a maximum of 180,000 hours in any 1 month.

[2] Work performed by 550 family heads who are laborers, assuming each works 200 hours per month when work is available for a maximum of 110,000 hours in any 1 month.

[3] Work performed by 600 family members other than head, assuming that each works 100 hours per month during months when work is available, for a maximum of 60,000 hours in any 1 month.

[4] Residual employment opportunity for itinerants, following from above assumptions.

A comparison of these tabulations reveals a number of significant facts: The total labor requirement in Dinuba is greater than in Arvin, but because of the larger number of operators, over half the work can be done by the operators and the number of hired laborers required is greater in Arvin than Dinuba. While the number of workers resident in Arvin is greater, and they can have a longer season for working, both communities require imported labor for short seasons. The amount of such labor is approximately the same. If a thousand hours of work per month requires four laborers, then Arvin requires nearly 1,000 migrant workers in June, and Dinuba, 1,500 in September.

APPENDIX D

METHOD OF OBTAINING POPULATION FIGURES

Population data on the town proper and the rural area within the boundary of the community as delineated have been developed from the schedules. They are based upon the total number of houses and the average persons per family interviewed. In Arvin the number of housing units on the DiGiorgio farms were included and the population determined on the assumption that the number of persons per household was the same as the average number among Arvin farm labor families generally.

The number of houses was established by a map of the community in which each house was spotted. These maps were made for each rural area and each town proper, and may be considered as substantially accurate.

The size of family was taken from the schedule and included all persons living in the home at the time of interview. The following tabulation shows the basic data and calculations for the population of the two communities:

TABLE 55.—*Calculations in the computation of Arvin and Dinuba population from schedule data*

	Arvin	Dinuba
Number of houses in town	760	1,128
Average family size in town	4.13	3.33
Town population	3,139	3,750
Number of houses in open country	564	1,095
Average family size in open country	4.35	3.33
Country population	2,463	3,654
Reported number of DiGiorgio houses	155	------------
Average family size of Arvin laborers	4.67	------------
DiGiorgio population	634	------------
Total population	6,236	7,404

APPENDIX E

METHOD OF DETERMINING LEVEL-OF-LIVING INDEX

The level-of-living index is a figure which summarizes the quality of living conditions or material possessions of any group within the total sample from the two communities. It expresses differences within the sample, and should not be used to compare this sample with others in other parts of the country.

The index is based upon eight items, each weighted according to the square root of the inverse of the frequency of its occurrence, rounded to the nearest whole number. This may be expressed:

$$W=\sqrt{\frac{1}{r}}$$

where W is the weight of each item and r is the percent of the total population possessing that item. Table 56 shows the method of computing the value of each item.

The level-of-living index for any family is the sum of the values for each item, a range from 0 to 44. Because of the few items on the scale and the high degree of association between items, the resulting curve is not as smooth as would be desired.

The evaluation of the condition of the home was determined by assigning differential values to each of the categories within the three questions calling for such evaluation, and taking the sum of these values. The values were: 3 for best conditions, 2 for second best condition, 1 for third best condition, and 0 for poorest condition. In one question only three categories were supplied, and these were given the value of 3, 2, and 0, respectively. No special weighting was given since the data are not amenable to further refinements in quantitative evaluation.

TABLE 56.—*Frequency distributions of items on the material level-of-living scale and value of items*

Item	Frequency		Index calculation	
	Number	Percent	Inverse percent	Value[1]
1. House construction:				
A. Brick, stucco, or paint	256	77	23	5
B. Unpainted or other	75	23		0
2. Rooms per person:				
A. 2 and over	100	30	70	8
B. 1-1.9	126	37	33	6
C. Under 1	111	33		0
3. Water piped in house:				
A. Yes	283	84	16	4
B. No	54	16		0
4. Lighting:				
A. Electric	330	98	2	1
B. Other	7	2		0
5. Refrigeration:				
A. Mechanical	225	67	33	6
B. Ice, other, or none	112	33		0
6. Radio:				
A. Yes	302	89	11	3
B. No	35	11		0
7. Telephone:				
A. Yes	96	29	71	8
B. No	240	71		0
8. Automobile:				
A. 1938 or later	111	33	67	8
B. 1937 or earlier	165	49	18	4
C. No auto	57	17		0

[1] Square root of the inverse percent rounded to nearest whole digit.

APPENDIX F

ASSOCIATION BETWEEN SOCIAL PHENOMENA

The assumption that a whole series of social phenomena, from level of living to type of social activities, were associated with occupation and income was subjected to statistical tests. The Chi Square test of significance and the use of T as a measure of relative association were found most useful. The following tabulation shows the value of T for those associations subjected to the test, and the annotations indicate the level of significance by the Chi Square test. The value of T expresses the degree to which independent employment and higher income are respectively associated with (1) each other, (2) above median level of living as determined by the level-of-living index, (3) membership of individuals 12 years old and over in clubs, (4) reported social activities other than those sponsored by club or church, (5) above median in the index of condition of the home as established by subjective evaluation, (6) membership of persons 12 years old and over in any church, and (7) membership of persons 12 years old and over in churches of highest standing, in contrast with membership in the intermediate and lower status churches.

The procedure was to reduce all sets into dichotomous classifications, using for all seriated data the break nearest the median and for other data mutually exclusive attributes. The fundamental occupational dichotomy between laborers and independently employed persons was used. The remaining dichotomies are self-explanatory.

The formulas used were:

$$X^2 = \sum \frac{(f-f_e)^2}{f_e} \qquad (1)$$

when f=observed data
f_e=expected distribution if unrelated.

$$T = \sqrt{\frac{X^2}{N}} \qquad (2)$$

when N=number of observations

Because Q is frequently used as a measure of degree of association, calculations of its value were made for a number of the associations here analyzed. Since Q is 1 when one cell is 0, since this is not actually a measure of perfect association, and since in some instances the number of cases in one cell is small, this measurement was rejected. Q values of items which meet the X^2 test of significance at the .001 level ran between .60 and .85.

TABLE 57.—*Association of social phenomena with occupation and income: Arvin and Dinuba*

Item associated	Value of T in the association of items			
	With occupation		With income	
	Arvin	Dinuba	Arvin	Dinuba
1. Income	0.26x	0.26		
2. Level of living	.40	.48	0.42	0.34
3. Club membership	.43	.45	.25	.27
4. Nonorganization social activity	.13xxx	.10xxx		
5. Condition of home	.29x	.29x	.33	.12x
6. Church membership	−.01xxxx	.06xxx	−.19	.12x
7. Class of church	.40	.28	.16xx	.27

The Chi Square test of the significance of associations was applied, and found to be greater than 0.001 in most cases. Those where the test was less significant have been marked as follows:

x, P=.01
xx, P=.1
xxx, P=.2
xxxx, P=.3

APPENDIX G

BUSINESS ENTERPRISE DATA: SOURCES AND METHODS

Information on type of enterprise and volume of retail trade was obtained from the records of the California State Board of Equalization assembled by staff members of the research and statistics section of the board in cooperation with the Bureau of Agricultural Economics.

California has a retail sales tax on all consumer commodities except foods purchased for off-premises consumption, and a few items covered by special taxes such as gasoline and cigarettes. In addition, it has a use tax which is paid by the consumer for items purchased from outside the State. The tax is always paid by the consumer to the merchant, who pays it over to the Board of Equalization, usually on a quarterly basis, occasionally on a monthly or annual basis. Each retail merchant selling taxable items, therefore, has an account with the board, and regularly reports the total sales tax, the total dollar volume of taxable merchandise sold, and the total dollar volume of business (including nontaxable sales). Services are not taxed, and certain types of enterprises, motion picture houses, banks, cleaning and pressing establishments, for example, are not covered unless they also sell taxable goods.

Since these taxes are an important source of revenue, the data on tax and taxable sales, and on enterprises selling such items, are closely watched and the data themselves are highly accurate. Since nontaxable items are not a factor in tax payments, records of sales of such merchandise are somewhat less reliable, and may be underenumerated. No estimates are available on such error, but it is assumed not to be large.

There is virtually universal coverage of all retail sales establishments, because no category of enterprise sells nontaxable goods exclusively. While groceries are not covered, soaps, paper towels, and so forth, are covered and therefore all grocers with a normal complement of goods must handle sales-tax moneys.

The most important stricture on the data is that the sales are recorded by class of business enterprise and not by type of merchandise sold. The board has worked out a classification of establishments which breaks them into 47 different groups, from general merchandise to industrial equipment. This classification, along with subcategories in each, has been published under the title "Business Classification Code of Permittees Licensed Under the California Retail Sales Tax Act" (California State Board of Equalization Sales and Use Tax Division, March 7, 1941, mimeographed). This publication indicates the general rules for classification, of which the following are significant to the present study: The classification should be made on the basis of the seller's principal line of business, whether taxable or not, but if he has two principal lines of equal importance, it should be made on the basis of the taxable one, or if the principal line of business is other than selling tangible property, it should be coded according to the principal retail trade sideline.

General knowledge of retail trade practices helps us to interpret data on the basis of the type of enterprise in which it was sold. While a vendor of packaged liquor in California frequently sells soft drinks and limes, it is known that his sales are usually so overwhelmingly in liquor that little doubt can be exercised. While grocers often sell wines and beers and nonedible merchandise, the great bulk of sales are of food, and the housewife usually classes under groceries all those things she gets at a grocery store. Some classes are less satisfactory—a general merchandise store may sell almost anything the local people require, from baby bottles to caskets. Within the broad categories used in the present study, this source of error is not very significant.

The fundamental procedure for extracting the data is simple. The account folders of all permittees with active accounts were withdrawn from the files, for each community, by class of enterprise. In this way the total number of enterprises subjected to analysis included all those with active accounts as of fourth quarter, 1943. The record of reported sales for the year (October 1942–September 1943) was recorded under the proper heading and the annual value indicated. At this point the name of the enterprise was dropped, and since this work was done by employees of the board, no information on individual accounts went outside the office.

Special assumptions and interpolation had to be made in some specific cases. Some enterprises had not been operating the full year. In these cases it was assumed that these businesses replaced others (every transfer of operator requires a new account) and that the missing months would have the average sale recorded for the months on record. Where heavy seasonal fluctuations were known to exist, appropriate adjustments were made. The second class of special cases was the chain stores. These stores are not required to report their sales by individual outlet, but report their total sales for the entire State and their taxable sales for the entire county. Total county sales were estimated by assuming that the ratio of taxable to total sales in any one county was the same as the ratio for the total enterprise. Allocation to individual outlets within the county had to be made by simply dividing evenly the county sales between the outlets in the county, the number of which is always reported. Such calculations are likely to overstate the total sales for the outlets in smaller communities (such as Arvin and Dinuba), but intimate knowledge of the region suggests that the error introduced in this way is not great. In Arvin, estimates were required for 10 outlets, 7 of which were only reported for only part of the year and 3 of which were chain stores. In Dinuba there were three partial accounts and four chain operations. Since the tendency of both types of estimate is to inflate total sales slightly, it is probable that the total difference between Arvin and Dinuba is slightly understated, though not to a very great extent. The large number of partial accounts in part reflects the growth in Arvin, in part the instability of its enterprises.

State law requires that no data be published which divulge the sales of any one enterprise. Therefore, combinations of different categories were made so that all published categories contain two or more enterprises.

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